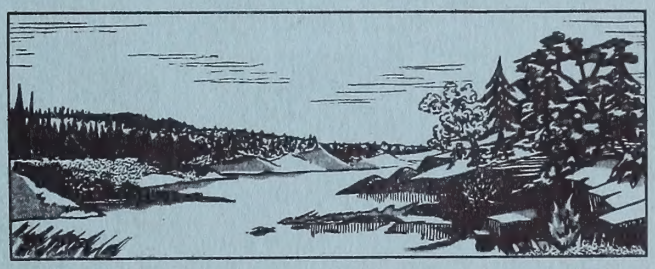
STATION PAPER NO. 15 JANUARY 1949

PUBLICATIONS OF THE LAKE STATES FOREST EXPERIMENT STATION 1923-1948



LAKE STATES FOREST EXPERIMENT STATION
UNIVERSITY FARM, ST. PAUL 4, MINN.
E. L. DEMMON, DIRECTOR

PUBLICATIONS OF THE

LAKE STATES FOREST EXPERIMENT STATION 1/

1923-1948

TABLE OF CONTENTS

1/ Maintained by the U. S. Department of Agriculture, Forest Service, in cooperation with the University of Minnesota, at University Farm, St. Paul 1, Minnesota.

THE LITERATURE OF THE

FOREST SERVICE FOREST EXPERIMENT STATION 1/

1924-1938

TABLE OF CONTENTS

1/ Maintained by the U. S. Department of Agriculture, Forest Service, in cooperation with the University of Minnesota, at Dalgreen Farm, Ch. and 1, Minnesota.

FOREWORD

Constant research is needed to guide most modern day activities along the best way, and forestry is no exception. However, research can be put to use only when its results are made known. For this reason it is almost as important to publish findings promptly as it is to discover them.

From this point of view the Lake States Forest Experiment Station has set a good record during its first 25 years. Its findings have been made available through nearly 1,000 publications.

The complete list of these publications has been compiled by Helen A. Woodworth, in charge of files and library at the Lake States Forest Experiment Station. The titles have been arranged into nine classes according to subject matter. Within each class the titles have been listed alphabetically by authors, and the writings of each author have been arranged in chronological order. Each publication has been assigned a number. At the end of the paper there is an index giving the numbers of the articles published by each author.

All publications available for general distribution are designated by *. Those in limited supply, which can be supplied only to schools, libraries, or conservation agencies are designated by **. All other publications listed are no longer available for distribution.

FOREWORD

Constant research is needed to guide most modern day activities along the best way, and therefore is so extensive. However, research can be put to use only when its results are made known. For this reason it is almost as important to publish findings promptly as it is to discover them.

From this point of view the Pacific Southwest Experiment Station has not a good record during its first 25 years. Its findings have been made available through nearly 1,000 publications.

The enclosed list of these publications has been compiled by Helen A. Robinson, in charge of files and library at the Pacific Southwest Experiment Station. The titles have been arranged into nine classes according to subject matter. Within each class the titles have been listed alphabetically by authors, and the writings of each author have been arranged in chronological order. Each publication has been designated a number. At the end of the paper there is an index giving the numbers of the articles published by each author.

All publications available for general distribution are designated by "*". Those in limited supply may be supplied only to schools, libraries, or conservation agencies are designated by "**". All other publications listed are no longer available for distribution.

1. FOREST MANAGEMENT AND SILVICULTURE

** 1. Aikman, J. M. Native vegetation of the region. Sec. 13, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 155-174. 1935.

* 2. Arbogast, Carl F. Young hardwood crop trees can be selected. Tech. Note No. 281, 1 p., mimeo. Oct. 1947.

3. Averell, James L. Review of "Om Sommarvarmens Innflydelse På Årringbredden (The Influence of Summer-Temperature on the Width of the Annual Ring)," by Erling Eide. 1926. Jour. For. 26(3): 370-371. March 1928.

4. _____ Review of "Vaxttidsundersökningar Å Tall Och Gran (Investigation of the Growth Period of Pine and Spruce)," by Lars Gunnar Romell. 1925. Jour. For 26(3): 371-373. March 1928.

5. _____ How much does it cost to thin? Jour. For. 28(4): 573-574. April 1930

6. Bates, C. G. Review of "Foundations of Silviculture upon an Ecological Basis," by James W. Toumey. 438 pp. 1928 Jour. For. 26(8): 1020-1023. Dec. 1928.

7. _____ Review of "The Root System of Pine (Pinus sylvestris): A Morphological Investigation," by E. Laitakari. 1927 Jour. For. 26(8): 1034-1037. Dec. 1928

8. Brown, R.M., and Petheram, H.D. Conversion of jack pine into red and white pine stands. Jour. For. 24(3): 265-271. March 1926

* 9. Engle, L.G. Skidding damage by tractors and horses in selective logging of northern hardwoods. Tech. Note No. 277, 1 p., mimeo. July 1947.

10. _____ Girdling northern hardwood wolf trees. Jour. For. 46(12): 925-926. Dec. 1948.

11. Eyre, F. H. Aspen competition in Norway pine plantations. Jour. For. 31(3): 318-321. March 1933.

12. _____ Possibilities of release cuttings in Minnesota forests. Jour. For. 31(4): 436-440. April 1933.

13. _____ and Blythe, R.H. Mortality in selectively cut northern hardwoods. Service Bull. 18(16): July 30, 1934. (Prepared for 39th Ann. meeting of Mich. Acad. of Sci., Arts, and Letters, March 17, 1934.) (Also mimeographed.)

14. _____ Dispersal of jack-pine seed from seed trees and slash. Papers Mich. Acad. Sci., Arts and Letters 21: 279-284. 1935. (Publ. 1936.)

15. Young, Leigh J., and Eyre, F. H. Release cuttings in plantations of white and Norway Pine. Papers Mich. Acad. Sci., Arts and Letters 22: 301-320. 1936. (Publ. 1937.)

16. Eyre, F.H., and Neetzel, J.R. Applicability of the selection method in northern hardwoods. Jour. For. 35(4): 353-358. April 1937.

17. _____ Can jack pine be regenerated without fire? Jour. For 36(10): 1067-1072. Oct. 1938.

18. _____ Silvicultural management of northern hardwoods. Jour. For. 37(7): 719-721. Sept. 1939.

*19. _____ and Neetzel, John R. Practical cutting methods for northern hardwoods. Papers Mich. Acad. Sci., Arts, and Letters 24: 197-208. Part I, 1938. (Publ. 1939)

*20. _____ and LeBarron, Russell K. Management of jack pine stands in the Lake States. USDA Tech. Bull. No. 863, 66 pp., illus. Feb. 1944.

21. _____ and Zehngraff, Paul J. Supplying Lake States needs for pine pulpwood through thinning. Canadian Pulp & Paper Assoc , Woodlands Sec. Index No. 803 (A-1). June 1945.

22. _____ and _____ Thinnings for pulpwood increase timber yield. Tech. Note No. 238, 1 p., mimeo. July 1945.

23. _____ and _____ Spacing of young red pine. Sta. Paper No. 8, 6 pp., mimeo. June 1947.

*24. _____ and _____ Red pine management in Minnesota. USDA Circ. No. 778, 70 pp., illus. May 1948.

25. Farrington, Robert A. Natural rotation for Lake States oak. Wis. Conserv. Bull. 7(7): 4. July 1942.

26. Gevorkiantz, S.R. Translation of Russian article by Junack, "Thinning Pine Forests." mimeo. Feb. 1935.

27. _____ and Roe, E.I. Photoperiodism in forestry. Jour. For. 33(6): 599-602. June 1935.

28. _____, Rudolf, P.O., and Zehngraff, P.J. A tree classification for aspen, jack pine, and second-growth red pine. Jour. For. 41(4): 268-274. April 1943.

29. Holmberg, L.A. Is suppression a possible cause of bird's-eye maple? Jour. For. 31(8): 968-970. Dec. 1933.

30. Kittredge, Joseph, Jr., and Belyea, Harold C. Reproduction with fire protection in the Adirondacks. Jour. For. 21(8): 784-787. Dec. 1923.

31. _____ It takes longer to grow white pine but farmers find it a profitable crop, figures indicate. Detroit News. Feb. 24, 1924.

32 _____ A proposed classification of the forest types of the Lake States. Jour. For. 23(11): 890-895. Nov. 1925.

33. _____ Thinning young red pine. Jour. For. 25(5): 555-559. May 1927.

34. _____ Management of the maple-basswood type in northern Minnesota. Jour. For. 25(8): 1040-1043. Dec. 1927.

35. _____ The use of soil surveys in forestry. 1st Internatl. Cong. Soil Sci., Proc. & Papers 4: 562-565 1928.

36. _____ The importance of time and rate of change in forest soil investigations. Proc. Internatl. Congress of Forestry Experiment Stations, Stockholm. pp. 479-484. 1929.

37. _____ and Olson, George T. Sampling forest types. Papers Mich. Acad. Sci., Arts and Letters 15: 229-237. 1931. (Publ. 1932.)

38. Alway, F.J., Kittredge, Joseph Jr., and Methley, W.J. Composition of the forest floor layers under different forest types on the same soil type. Soil Science 36(5): 387-398. Nov. 1933.

39. Kittredge, Joseph Jr. Evidence of the rate of forest succession on Star Island, Minnesota. Ecology 15(1): 24-35. Jan. 1934.

40. Lake States Forest Experiment Station. Release of young Norway pine from aspen competition. Jour. For. 33(2): 174-175. Feb. 1935.

*41. _____ Extensions in the range of Lake States trees. Jour. For. 36(4): 437-438. April 1938. (Tech. Note No. 129.)

*42. _____ Some notes on jack pine. Forestry Chronicle 15(3): 172-174. Sept. 1939. (Comprises Tech. Notes Nos. 148-151.)

43. _____ Field studies in selective logging - Upper Peninsula Experimental Forest, Dukes, Michigan. Mimeo. Sept. 1939.

*44. _____ Growth of northern hardwoods after partial cutting. Tech. Note No. 6, 1 p., mimeo. Oct. 1928.

*45. _____ What happens to millions of little trees in a virgin hardwood forest. Tech. Note No. 9, 1 p., mimeo. March 1929.

*46. _____ Breakage no obstacle to selective logging. Tech. Note No. 16, 1 p., mimeo. Aug. 1929

*47. _____ How much light do forest trees need? Tech. Note No. 17, 1 p., mimeo. Sept. 1929.

*48. _____ Ordinary white daylight is best for growth of trees. Tech. Note No. 18, 1 p., mimeo. Sept. 1929.

*49. _____ Ground vegetation - an indicator of forest growth. Tech. Note No. 25, 1 p., mimeo. Sept. 1930.

*50. _____ More light in the forest? Tech. Note No. 26, 1 p., mimeo. Sept. 1930.

*51. _____ Germination and survival of conifers under aspen. Tech. Note No. 28, 1 p., mimeo. Sept. 1930.

*52. _____ Drought resistance of forest plants. Tech. Note No. 32, 1 p., mimeo. Feb. 1931.

*53. _____ Effect of forest cover on drought injury to undergrowth. Tech. Note No. 33, 1 p., mimeo. Feb. 1931.

*54. _____ Sunlight and forest growth. Tech. Note No. 35, 1 p., mimeo. Feb. 1931.

*55. _____ Is light important immediately after germination? Tech. Note No. 46, 1 p., mimeo. Dec. 1931.

*56. _____ Jack pine - pulpwood or sawlogs? Tech. Note No. 51, 1 p., mimeo. May 1932.

*57. _____ Growing bigger and better aspen. Tech. Note No. 52, 1 p., mimeo. May 1932.

*58. _____ Aspen and birch follow pine cutting in northeastern Minnesota. Tech. Note No. 53, 1 p., mimeo. May 1932.

*59. _____ How to cut black spruce. Tech. Note No. 54, 1 p., mimeo. May 1932.

*60. _____ Release cuttings needed in natural second-growth stands. Tech. Note No. 61, 1 p., mimeo. Feb. 1933.

*61. _____ How to thin young Norway pine. Tech. Note No. 64, 1 p., mimeo. Nov. 1933.

*62. _____ Paper birch - a windfirm tree. Tech. Note No. 67, 1 p., mimeo. Nov. 1933.

*63. _____ Damage to young growth by logging. Tech. Note No. 76, 1 p., mimeo. May 1934.

*64. _____ Mortality in selectively cut northern hardwoods. Tech. Note No. 79, 1 p., mimeo. May 1934.

*65. _____ Is jack pine a prolific seeder? Tech. Note No. 84, 1 p., mimeo. May 1934.

*66. _____ Soils as a guide in forest management. Tech. Note No. 91, 1 p., mimeo. Aug. 1935.

*67 _____ Growth rate of aspen indicates potential forest cover. Tech. Note No. 92, 1 p., mimeo. Aug. 1935.

*68. _____ Regional variation in composition of old-growth northern hardwood forests. Tech. Note No. 95, 1 p. mimeo. Aug. 1935.

*69. _____ What trees withstand drought best? Tech. Note No. 97, 1 p., mimeo. Aug. 1935.

*70. _____ Soil treatment greatly increases jack pine reproduction. Tech. Note No. 101, 1 p., mimeo. Jan. 1936.

*71. _____ Natural reproduction is affected by weather conditions. Tech. Note No. 105, 1 p., mimeo. Jan. 1936.

*72. _____ Large quantities of seed produced by northern hardwood forest. Tech. Note No. 118, 1 p., mimeo. May 1936.

*73. _____ Windfirmness of black spruce in residual stands. Tech. Note No. 119, 1 p., mimeo. May 1936.

*74. _____ Extensions in the range of Lake States trees. Tech. Note No. 129, 1 p., mimeo. Sept. 1937.

*75. _____ White spruce on alkaline soils. Tech. Note No. 134, 1 p., mimeo. Feb. 1938.

*76. _____ How to obtain effective dispersal of jack pine seed. Tech. Note No. 136, 1 p., mimeo. Feb. 1938.

*77. _____ Earlier returns from thinned red pine. Tech. Note No. 138, 1 p., mimeo. Feb. 1938.

*78. _____ When to cut jack pine. Tech. Note No. 141, 1 p., mimeo. Feb. 1938.

*79. _____ Black spruce maintains a year-round seed supply. Tech. Note. No. 146, 1 p., mimeo. April 1939.

*80. _____ Black spruce seed is a limited air traveler. Tech. Note No. 147, 1 p., mimeo., illus. April 1939

*81. _____ Comparative resistance of native Wisconsin trees to snow breakage. Tech. Note No. 152, 1 p., mimeo. April 1939.

*82. _____ Thinned stands fill up rapidly. Tech. Note No. 160, 1 p., mimeo. May 1940.

*83. _____ Effectiveness of soil scarification in promoting jack pine reproduction. Tech. Note No. 161, 1 p., mimeo. May 1940.

*84. _____ Relationship of temperature to dispersal of jack pine seeds. Tech. Note No. 164, 1 p., mimeo. May 1940.

*85. _____ Jack pine cones in slash open in midsummer. Tech. Note No. 165, 1 p., mimeo. May 1940.

*86. _____ Light cuttings in hardwoods show high quality increment. Tech. Note No. 166, 1 p., mimeo. May 1940.

*87. _____ Do young second-growth northern hardwoods need care? Tech. Note No. 167, 1 p., mimeo. May 1940.

*88. _____ Effect of season on germination and early survival. Tech. Note No. 168, 1 p., mimeo. May 1940.

*89. _____ Thinnings assume commercial importance. Tech. Note No. 186, 1 p., mimeo. March 1942.

*90. _____ Black spruce should not be cut clean. Tech. Note No. 187, 1 p., mimeo. March 1942.

*91. _____ Jack pine reverts to balsam fir in northeastern Minnesota. Tech. Note No. 188, 1 p., mimeo. March 1942.

*92. _____ Upland black spruce not a stable type. Tech. Note No. 189, 1 p., mimeo. March 1942.

*93. _____ Northern hardwoods can be cut selectively at short intervals. Tech. Note No. 219, 1 p., mimeo. April 1944.

*94. _____ Does diameter growth response hold above d.b.h.? Tech. Note No. 222, 1 p., mimeo. April 1944.

*95. LeBarron, Russell K., and Eyre, Francis H. The influence of soil treatment on jack-pine reproduction. Papers Mich. Acad. Sci., Arts, and Letters 23: 307-310. 1937. (Publ. 1938.)

**96. _____ and _____ The release of seeds from jack pine cones. Jour. For. 37(4): 305-309. April 1939.

97. _____ Fire babies. M.A.C. Gopher. Nov. 1939.

*98. _____ Partial cutting in black spruce in the Lake States. Papers Mich. Acad. Sci., Arts, and Letters 28: 249-260. 1942. (Publ. 1943.)

*99. _____ Influence of controllable environmental conditions on regeneration of jack pine and black spruce. Jour. Agr. Res. 68(3): 97-119. Feb. 1944.

100. _____ Review of "Growth and Occurrence of Spruce and Fir on Pulpwood Lands in Northern Michigan," by A. B. Bowman, 82 pp. 1944. Jour. For. 43(2): 149-150. Feb. 1945.

101. _____ Review of "The Peats of New Jersey and their Utilization. Part A, Nature and Origin of Peat. Composition and Utilization," by Selman A. Waksman. Part B, "The Peat Resources of New Jersey," by Selman A. Waksman, H. Schulhoff, C. A Hickman, T. C. Gordon, and S. C. Stevens. 1942 and 1945. Jour. For. 43(2): 150-151. Feb. 1945.

*102. _____ What causes mortality in black spruce after partial cutting? Tech. Note No. 231, 1 p., mimeo. April 1943.

**103. _____ Annotated bibliography of black spruce. 10 pp., mimeo. May 1945.

**104. _____ Adjustment of black spruce root systems to increasing depth of peat. Ecology 26(3): 309-311. July 1945.

*105. _____ Light cutting in black spruce is practicable. Jour For. 43(7): 486-489. July 1945.

*106. _____ Mineral soil is favorable seedbed for spruce and fir. Tech. Note No. 237, 1 p., mimeo. July 1945.

*107. _____ Shrub growth hinders black spruce reproduction in swamps. Tech. Note No. 240, 1 p., mimeo. July 1945.

*108. _____ Silvicultural management of black spruce in Minnesota. USDA Circ. No. 791, 60 pp., illus. Oct. 1948.

109. Marshall, G. E., and Cummings, M. J. Slash disposal in northern Minnesota. Amer. Lumberman 2698: 84-85. illus. Jan. 29, 1927.

110. Mitchell, J. A. Henry Ford's logging operation. Amer. Lumberman 2539: 60-61. Jan. 12, 1924.

111. _____ Soil building and soil destruction. Parks and Recreation. May-June 1925.

112. Nowat, E. L. Review of "The Growth of Hemlock Before and After Release from Suppression," by Robert Marshall. 1927. Jour. For. 26(3): 374-375. March 1928.

113. _____ The Upper Peninsula Forest Experiment Station--What it does and aims to do. Mich. State College Forestry Annual. April 1928.

114. _____ Some of the activities of the Upper Peninsula national forest experiment station. Development Bureau News. Aug. 1, 1928.

115. _____ Breakage no obstacle to selective logging. Jour. For. 28(1): 99-100. Jan. 1930.

*116. Neff, L. P. The right kind of black spruce growing stock pays off. Tech. Note No. 298, 1 p., mimeo. July 1948.

117. Roe, E.I. Some possibilities of the use of plant indicators in the Lake States. Cornell Countryman 28(6): 136-137. March 1931.

118. _____ The soil as a guide to stand treatment. 9 pp., mimeo. Feb. 1935.

119. _____ Forest soils - the basis of forest management. 9 pp., mult. Aug. 1935.

120. _____ and Rudolf, P.O. A new station for hemlock in Minnesota. Torreya 37: 10-14. Feb. 27, 1937.

121. _____ Lake States tree ranges. Western Trees, Parks & Forests 1(2): 12. March 1938.

122. _____ Know your trees: 25 native trees every southern Minnesota Scout should know. 13 pp., mimeo. Issued by St. Paul Area Council, Boy Scouts of America. May 1945.

123. _____ Viable seed produced by 12-year-old red pine. Jour. For. 43(9): 678-679. Sept. 1945.

*124. _____ Slash removal an important factor in restocking cut-over spruce swamps. Tech. Note No. 249, 1 p., mimeo. Jan. 1946.

*125. _____ Extended periods of seedfall of white spruce and balsam fir. Tech. Note No. 261, 1 p., mimeo. Oct. 1946. Publ. under title "Vital Seedfall Data," in Lake States Timber Digest 1(18): 9. June 5, 1947.

*126. _____ Thinning in cedar swamps. Tech. Note No. 279, 1 p., mimeo. July 1947. Timber Prod. Assoc. Monthly Bull. (Duluth) 3(8): 16. April 1948.

127. _____ Tamarack - promising species for Minnesota. Conservation Volunteer (Minn.) 11(64): 49-50. May-June 1948.

128. _____ Effect of red squirrels on red pine seed production in off years. Jour. For. 46(7): 528-529. July 1948.

129. _____ Early seed production by balsam fir and white spruce. Jour. For. 46(7): 529. July 1948.

130. Rudolf, Paul O. Review of "Om Granens Kottsättning, Dess Periodicitet Och Samband Med Temperatur Och Nederbörd (The Cone-setting of Spruce, Its Periodicity and Relation to Temperature and Precipitation)," by Lars Tirén. 1935. Jour. For. 34(4): 444-445. April 1936.

131. _____ Review of "The Plant and Its Water Supply," by E. J. Salisbury. 1937. Jour. For. 37(6): 499-500. June 1939.

132. _____ Review of "Rubki Ukhoda Za Lesom (Thinnings in Forests)," by Tsentral'nyi Nauchno-Issledovetel'skii Institut Lesnogo Khoziastva (Central Forest Research Institute). 1940. Jour. For. 43(5): 383. May 1945.

*133. _____ Successful jack pine regeneration in Lower Michigan. Tech. Note No. 254, 1 p., mimeo. April 1946.

134. Salminen, W. A., and Engle, L.G. A young hardwood stand is thinned profitably. Timber Prod. Bull. (Upper Mich. & Wisc.) 63: 9. June 1948.

135. Sauer, K.W. The Kawishiwi experimental forest. Ames Forester. 1936.

136. Wilde, S.A., and Scholz, H.F. The basis for subdividing mountainous forests for the purpose of management. Jour. For. 28(8): 1104-1109. Dec. 1930.

137. Scholz, Harold F. Physical properties of the cove soils on the Black Rock Forest. Black Rock Forest Bull. 2, 59 pp., illus. 1931.

138. _____ Mapping of forest soils. Ames Forester 29. 1931.

139. Wilde, S.A., and Scholz, H.F. Subdivision of the Upper Peninsula Experimental Forest on the basis of soils and vegetation. Soil Science 38(5): 383-398. Nov. 1934.

140. Scholz, Harold F. The effect of soil texture upon the growth of red and chestnut oaks. Black Rock Forest Papers 1(11): 76-79. 1937.

*141. _____ Cutting immature oak timber sacrifices quality increment. Tech. Note No. 253, 1 p., mimeo. April 1946.

**142. _____ Diameter-growth studies of northern red oak and their possible silvicultural implications. Iowa State Coll. Jour. Sci. 22(4): 421-429. July 1948.

143. Shirley, Hardy L. Light sources and light measurements. Plant Physiology 6: 447-466. 1931.

**144. _____ Does light burning stimulate aspen suckers? Part I, Jour. For. 29(4): 524-525. April 1931. Part II, Jour. For. 30(4): 419-420. April 1932.

145. _____ Pine seedlings show response to sunlight in growth and density. USDA Yearbook 1932: 292-294.

*146. _____ Light intensity in relation to plant growth in a virgin Norway pine forest. Jour. Agr. Res. 44(3): 227-244. Feb. 1, 1932.

147. _____ Improving seed-bed conditions in a Norway pine forest. Jour. For. 31(3): 322-328. March 1933.

148. _____ Observations on drought injury in Minnesota forests. Ecology 15(1): 42-48. Jan. 1934.

149. _____ A method of studying drought resistance in plants. Science 79(2036): 14-16. Jan. 5, 1934.

150. _____ Light as an ecological factor and its measurement. Botanical Review 1: 355-381. Sept. 1935.

151. _____ The utilization of solar radiation by forests. Bull. Amer. Meteorological Soc. 17(3): 64-67. March 1936.

152. _____ Growing high-quality timber. Jour. For. 34(4): 436. April 1936.

153. _____ Review of "Holzfehler (Timber Defects)," by Hermann Knuchel. 1934. Jour. For. 34(4): 443-444. April 1936.

154. _____ Will pine or aspen dominate Minnesota forests? Proc. Minn. Acad. Sci. 4: 25-28. April 1936.

155. _____ The effects of light intensity upon seed plants. Chap. 21 of "Biological Effects of Radiation." McGraw-Hill. 1936.

156. _____ Review of "Tree Growth," by Daniel T. MacDougal. 1938. Jour. For. 37(5): 426-427. May 1939.

157. _____ Review of "The Growth and Nutrition of White Pine (Pinus strobus, L.) Seedlings in Cultures with Varying Nitrogen, Phosphorous, Potassium and Calcium," by H. L. Mitchell. 1939. Jour. For. 37(7):587-588. July 1939.

158. _____ and Zehngraff, Paul. Height of red pine saplings as associated with density. Ecology 23(3): 370. July 1942.

**159. Stoeckeler, J.H. A new jack for pulling soil-sampling tubes. Soil Science 43(5): 379-383. May 1937.

160. _____ and Kluender, W.A. The hydraulic method of excavating root systems of plants. Ecology 19(3): 355-369. July 1938.

161. _____ Soil adaptability of white spruce. Jour. For. 36(11): 1145-1147. Nov. 1938.

162. _____ More on thinning. Plains Forester 7(1): 8-9. Jan. 1942.

163. _____ Review of "Forest Soils: Origin, Properties, Relation to Vegetation, and Silvicultural Management," by S. A. Wilde. 1942. Jour. For. 40(4): 351-352. April 1942.

164. _____ Review of "Forest Soils and Forest Growth," by S. A. Wilde. 1946. Bot. Gaz. 108: 458. March 1947.

165. _____ Review of "The Destruction of the Soil in Palestine," by F. H. Taylor. 1946. Jour. For. 45(5): 378-379. May 1947.

166. _____ Too many jack pines per acre pose a real problem for Mosinee foresters. Tree Tips, p. 3. June 1947.

167. _____ Review of "Forest Soils," by Harold J. Lutz and Robert F. Chandler, Jr. 1946. Jour. For. 45(8): 606-608. Aug. 1947.

*168. _____ and Arbogast, Carl F. Thinning and pruning in young second-growth hardwoods in northeastern Wisconsin. Proc. S.A.F. meeting, Dec. 17-20, 1947. pp. 328-346.

169. _____ Timber stand improvement is a job that confronts many Wisconsin land owners. Tree Tips, p. 2, April 1948. Timber Prod. Bull. (Upper Mich. & Wisc.) 65: 6. Aug. 1948.

*170. _____ The growth of quaking aspen as affected by soil properties and fire. Jour. For. 46(10): 727-737. Oct. 1948.

171. _____ and Arbogast, C.F. Second annual timber harvest field day staged by forest research center and extension service near Hiles, Wisconsin. Timber Prod. Bull. (Upper Mich. & Wisc.) 68: 6-7. Nov. 1948. Lake States Timber Digest 3(4): 4. Dec. 2, 1948.

172. Wackerman, A.E. Forest redemption of Michigan. Lumber World Review, Jan. 10, 1924. Detroit News, Dec. 26, 1923.

173. _____ Improvement timber cutting in progress on Cloquet Forest. Pine Knot (Cloquet, Minn.), Jan. 11, 1924.

174. _____ A mighty elm grown in a Michigan Forest. Detroit News. March 15, 1924.

175. _____ The last stand of Michigan's primeval forest. Detroit News. May 18, 1924.

176. _____ Earthworms in the forest. Jour. For. 24(4): 454-455. April 1926.

177. _____ Selective logging in the Upper Peninsula. Development Bureau News. Dec. 1926.

178. _____ Selective logging - what it means to the mining industry. Lake Superior Mining Institute, Ann. Meeting 25: 188-196. 1926.

179. _____ Where can timber be grown commercially in the United States? Jour. For. 26(3): 394-398. March 1928.

180. _____ Some do's and don'ts in making a forest survey. Minn. Univ. Forestry Club, Gopher Peavey 1928: 58-61. 1928.

181. Zehngraff, Paul J. Jack pine regeneration following clear cutting on the Chippewa National Forest. Jour. For. 41(2): 122-125. Feb. 1943.

*182. _____ Effective seeding range of red pine. Tech. Note No. 228, 1 p., mimeo. Jan. 1945.

*183. _____ Season of cutting affects aspen sprouting. Tech. Note No. 250, 1 p., mimeo. Jan. 1946.

184. _____ Thinning of dense young aspen is a good investment. Blackduck American. April 11, 1946.

*185. _____ How to improve aspen stocking following summer logging. Tech. Note. No. 251, 1 p., mimeo. April 1946. Timber Prod. Assoc. Monthly Bull. (Duluth) 1(9): 3. May 1946.

*186. _____ Aspen suckers can produce well-stocked mature stands. Tech. Note No. 257, 1 p., mimeo. July 1946.

*187. _____ Thinning young aspen can pay. Tech. Note No. 263, 1 p., mimeo. Oct. 1946.

*188. _____ Possibilities of managing aspen. Lake States Aspen Report No. 21, 23 pp., mult. June 1947.

*189. _____ Response of young aspen suckers to overhead shade. Tech. Note No. 278, 1 p., mimeo. July 1947.

*190. _____ and Gevorkiantz, S.R. Mortality losses are low in managed forests. Tech. Note No. 297, 1 p., mimeo. July 1948.

191. Zillgitt, W. M. Growth response in sugar maple following light selective cutting. Jour. For. 42(9): 680. Sept. 1944.

*192. _____ Growth response in sugar maple following light selective cutting. Tech. Note No. 229, 1 p., mimeo. Jan. 1945.

*193. _____ Young growth little damaged in selective logging of northern hardwoods. Tech. Note No. 234, 1 p., mimeo. April 1945.

194. _____ and Eyre, F.H. Perpetuation of yellow birch in Lake States forests. Jour. For. 43(9): 658-661. Sept. 1945.

*195. _____ Stand changes following light selection cutting. Tech. Note No. 247, 1 p., mimeo. Jan. 1946. Lake States Timber Digest 1(18): 5. June 5, 1947.

*196. _____ Stocking in northern hardwoods under the selection system. Proc. S.A.F. meeting, Dec. 17-20, 1947. pp. 320-327.

197. Zon, Raphael, and Shantz, H.L. Map of natural vegetation. USDA. Sept. 1924.

198. Shantz, H. L., and Zon, Raphael. The natural vegetation of the United States. USDA, BAE, Atlas Amer. Agr., pt. 1, sec. E, 29 pp., illus. 1924.

199. Zon, Raphael. Timber cutting by selective logging replacing old way. USDA Yearbook 1927: 615-617.

200. _____ Silviculture as a factor in maintaining the fertility of forest soils. 1st Internatl. Cong. Soil Sci. Proc. & Papers 4: 575-582. 1928. Soil Science. Jan. 1928.

201. _____ Timber growing and logging practice in the Lake States. USDA Bull. 1496, 64 pp., illus. Feb. 1928.

202. _____ and Mowat, E.L. New forests for old in Wisconsin. Wisc. Agriculturist. April 20, 1929.

203. Alway, F.J., and Zon, Raphael. Quantity and nutrient contents of pine leaf litter. Jour. For. 28(5): 715-727. May 1930.

204. Zon, Raphael. Growing our timber and pulpwood at home. U.S. Daily. March 12, 1932.

**205. _____ The forest - a plant society. Minn. Conservationist. Aug. 1935.

206. _____ Review of "The Theory and Practice of Silviculture," by F. S. Baker. 1934. Science 83(2140): 16-17. Jan. 3, 1936.

207. _____ Review of "Tree Flowers of Forest, Park, and Street," by W. E. Rogers. 1935. Sat. Rev. of Lit. 13(22). March 28, 1936.

208. _____ New trends in German forestry. Review of "German Forestry," by Franz Heske. 1938. Science 88(2281): 259-261. Sept. 16, 1938.

2. REGENERATION (SEED, NURSERY, PLANTING)

209. Aamodt, E. E. A stem-caliper gauge for nurseries. Jour. For. 39(8): 728. Aug. 1941.

210. Averell, James L. The Swedish "Better Sires" campaign of 1904. Jour. For. 25(6): 742-744. Oct. 1927.

211. _____ Review of "The Seed Production of Forest Trees, Year 1926," by G. Mellström. Jour. For. 26(2): 237-238. Feb. 1928.

212. Bates, Carlos G. Tree "Seed Farms". Jour. For. 26(8): 969-976. Dec. 1928.

213. _____ Some problems of seed production, collection and distribution. Paper delivered at meeting of Canadian Soc. Forest Engineers, Winnipeg, Jan. 16, 1929. 13 pp. For. Chron. 5(1): 17-29. 1929.

214. _____ Review of "The Varieties and Geographical Forms of Pinus pinaster Soland, in Europe and South Africa," by C. E. Duff. 1928. Jour. For. 28(2): 220-221. Feb. 1930.

215. _____ Review of "Racer af Douglasie og Sitkagran (Races of Douglas Fir and Sitka Spruce)," by A. Oppermann. 1929. Jour. For. 28(2): 219-220. Feb. 1930.

216. _____ Why nurserymen prefer southern seeds. Jour. For. 28(2): 232-233. Feb. 1930.

217. _____ The frost hardiness of geographic strains of Norway pine. Jour. For. 28(3): 327-333. March 1930.

218. _____ One-year storage of white pine seed. Jour. For. 28(4): 571-572. April 1930.

219. _____ A new principle in seed collecting for Norway pine. Jour. For. 29(5): 661-678. May 1931.

220. _____ McHenry County may have pine forests. No. Dak. Outdoors 1(3): 2-4. mimeo. Oct. 1931.

*221. _____ and Rudolf, Paul O. Creating new forests. Jour. For. 36(9): 844-846. Sept. 1938.

222. Fisher, P.L., Briggs, A.H., Elkins, W.A., and Roe, E.I. Propagation of game food and cover plants of the Lake States. 81 pp., mimeo. Oct. 1935.

223. _____, Briggs, A.H., and Shirley, H.L. Improving tree seed germination. 5 pp., mult. Nov. 1936.

224. Gevorkiantz, S. R. Determination of forest seed quality. Jour. For. 26(8): 1043-1046. Dec. 1928.

225. _____ and Rudolf, P.O. Translation from the Russian, "Ob Organizatsii Ezhegodnykh Sistematicheskikh Nablyudenii Nad Plodonoshenium Drevesnykh Porod (The Organization of Annual Systematic Observations on Seed Production of Forest Tree Species)," by V. G. Kapper. U.S. Forest Service Trans. No. 98, 27 pp., mimeo. 1933.

226. _____ and _____ Translation of "Oblsedovanie i Issledovanie Lesnikh Kultur (Examination and Analysis of Forest Plantations)," by Prof. N. P. Kobranov. U. S. Forest Service Trans. No. 121, mimeo. 1933.

227. Kittredge, Joseph, Jr. Reforestation - what is the answer in the Lake States? Lumber World Rev. 47(9): 94-95. Nov. 10, 1924.

228. _____ Trees planted for timber often do best on worn out farm land. USDA Yearbook 1927: 655-656.

229. _____ Forest planting in the Lake States. USDA Bull. 1497, 88 pp., illus. June 1929.

*230. Lake States Forest Experiment Station. Behavior of white, Norway and jack pine seeds. Tech. Note No. 1, 1 p., mimeo. May 1928.

*231. _____ Abandoned fields are best sites for forest planting. Tech. Note. No. 2, 1 p., mimeo. May 1928.

*232. _____ Climatic seed sources for Norway pine. Tech. Note No. 5, 1 p., mimeo. Oct. 1928.

*233. _____ The forest seed crop of 1928. Tech. Note No. 7, 1 p., mimeo. Oct. 1928.

*234. _____ Germination tests of tree seeds. Tech. Note No. 12, 1 p., mimeo. March 1929.

*235. _____ Storage of Norway pine seed. Tech. Note No. 15, 1 p., mimeo. Aug. 1929.

*236. _____ Why nurserymen prefer southern seeds. Tech. Note No. 19, 1 p., mimeo. Sept. 1929.

*237. _____ Frost hardiness of races of Norway pine seedlings. Tech. Note No. 22, 1 p., mimeo. Jan. 1930.

*238. _____ One year of storage benefits white pine seed. Tech. Note No. 23, 1 p., mimeo. Jan. 1930.

*239. _____ Germination tests for coniferous seeds. Tech. Note No. 24, 1 p., mimeo. Jan. 1930.

*240. _____ Pre-treatment of white pine seed for spring sowing. Tech. Note No. 29, 1 p., mimeo. Sept. 1930.

*241. _____ Centers for collecting seed of Norway pine. Tech. Note No. 30, 2 pp., mimeo., illus. Feb. 1931.

*242. _____ Helping nature to seed the forest. Tech. Note No. 45, 1 p., mimeo. Dec. 1931.

*243. _____ Neglected plantations seldom successful. Tech. Note No. 55, 1 p., mimeo. May 1932.

*244. _____ Dryness - key to storage of pine seed. Tech. Note No. 56, 1 p., mimeo. May 1932.

*245. _____ Direct seeding can sometimes be used in reforestation. Tech. Note No. 60, 1 p., mimeo. Feb. 1933.

*246. _____ Well developed stock necessary for successful planting. Tech. Note No. 63, 1 p., mimeo. Feb. 1933.

*247. _____ Grading seedlings. Tech. Note No. 65, 1 p., mimeo. Nov. 1933.

*248. _____ Planting under aspen can be made successful. Tech. Note No. 80, 1 p., mimeo. May 1934.

*249. _____ How effective is the commercial method of treating green ash? Tech. Note No. 87, 1 p., mimeo. Aug. 1935.

*250. _____ Why seeds are dormant. Tech. Note No. 88, 1 p., mimeo. Aug. 1935.

*251. _____ How can seed dormancy be determined? Tech. Note No. 89, 1 p., mimeo. Aug. 1935.

*252. _____ Some new chemical aids in hastening seed germination. Tech. Note No. 90, 1 p., mimeo. Aug. 1935.

*253. _____ Prolonged exposure of roots causes death of planting stock. Tech. Note No. 96, 1 p., mimeo. Aug. 1935.

*254. _____ What rainfall factor causes drought damage? Tech. Note No. 98, 1 p., mimeo. Aug. 1935.

*255. _____ Seedlings or transplants. Tech. Note No. 99, 1 p., mimeo. Aug. 1935.

*256. _____ Effect of shade in reducing soil surface temperatures. Tech. Note No. 100, 1 p., mimeo. Aug. 1935.

*257. _____ Planting stock must contend with high surface temperatures. Tech. Note No. 103, 1 p., mimeo. Jan. 1936.

*258. _____ Does stock balance affect survival? Tech. Note No. 104, 1 p., mimeo. Jan. 1936.

*259. _____ Abrasives used in scarifying forest tree seeds. Tech. Note No. 106, 1 p., mimeo. Jan. 1936.

*260. _____ Nursery shade requirements of ponderosa pine. Tech. Note No. 115, 1 p., mimeo. May 1936.

*261. _____ Winter injury to plantations. Tech. Note No. 117, 1 p., mimeo. May 1936.

*262. _____ Heat more injurious than lack of moisture during drought. Tech. Note No. 125, 1 p., mimeo. Feb. 1937.

*263. _____ Watering reduces soil-surface temperatures. Tech. Note No. 126, 2 pp., mimeo. Sept. 1937. Jour. For. 36(6): 611-612. June 1938.

*264. _____ Seed origin affects survival of green ash in the nursery. Tech. Note No. 128, 1 p., mimeo. Sept. 1937.

*265. _____ Is spring or fall the better planting season? Tech. Note No. 131, 1 p., mimeo. Sept. 1937. Jour. For. 36(11): 1160-1161. Nov. 1938.

*266. _____ Does freezing injure planting stock? Tech. Note No. 132, 1 p., mimeo. Sept. 1937. Jour. For. 36(12): 1244-1245. Dec. 1938.

*267. _____ Peat or sand for covering on spruce seedbeds? Tech. Note No. 137, 1 p., mimeo. Feb. 1938.

*268. _____ Water tables and survival. Tech. Note No. 139, 2 pp., mimeo., illus. Feb. 1938.

*269. _____ Deep rooting and plantation survival. Tech. Note No. 140, 2 pp., mimeo., illus. Feb. 1938.

*270. _____ Thinning of conifer seedlings in the nursery produces bigger but fewer plantable trees. Tech. Note No. 143, 1 p., mimeo. April 1939.

*271. _____ Beneficial effect of partial shade on field survival. Tech. Note No. 144, 1 p., mimeo. April 1939.

*272. _____ Top-pruning of conifer stock a doubtful operation. Tech. Note No. 145, 1 p., mimeo. April 1939.

*273. _____ Jack pine seed habits. Tech. Note No. 148, 1 p., mimeo. April 1939.

*274. _____ When do jack pine seeds germinate? Tech. Note No. 149, 1 p., mimeo. April 1939.

*275. _____ A fast-growing and winter-hardy poplar hybrid still to be found for the Lake States. Tech. Note No. 153, 1 p., mimeo. April 1939.

*276. _____ Top-root ratio and size of top very important in fall-planted stock. Tech. Note No. 158, 1 p., mimeo. May 1940.

*277. _____ Effect of liquid fertilizers on nursery stock. Tech. Note No. 162, 1 p., mimeo. May 1940.

*278. _____ Fertilized nursery stock shows increased nursery production and higher field survival. Tech. Note No. 169, 1 p., mimeo. May 1940.

*279. _____ Storage of red pine seed. Tech. Note No. 173, 1 p., mimeo. Jan. 1941.

*280. _____ Testing cone ripeness. Tech. Note No. 176, 1 p., mimeo. Jan. 1941.

*281. _____ Effect of temperature on germination. Tech. Note No. 177, 1 p., mimeo. Jan. 1941.

*282. _____ Root pruning - a labor saver. Tech. Note No. 190, 1 p., mimeo. March 1942.

*283. _____ Disking saves the topsoil in forest planting. Tech. Note No. 218, 1 p., mimeo. April 1944.

284. LeBarron, R.K.; Fox, Gordon; and Blythe, R.J., Jr. The effect of season of planting and other factors on early survival of forest plantations. Jour. For. 36(12): 1211-1215. Dec. 1938.

*285. _____ and Roe, Eugene I. Hastening the extraction of jack pine seeds. Jour. For. 43(11): 820-821. Nov. 1945.

286. Meuli, L. J. Drought resistance of green ash as affected by geographic origin. Proc. Minn. Acad. of Sci. 4: 38-42. 1936.

287. _____ and Shirley, H. L. The effect of seed origin on drought resistance of green ash in the prairie-plains states. Jour. For. 35(11): 1060-1062. Nov. 1937.

288. Mitchell, J. A. Land reclamation begun in Michigan. St. Paul Dispatch. Dec. 12, 1923. Pine Knot (Cloquet, Minn.). Dec. 14, 1923.

289. _____ Cut-over areas need reforestation. Gopher Countryman. June 1924.

*290. Roe, Eugene I. Longevity of red pine seed. Proc. Minn. Acad. Sci. 8: 28-30, illus. 1940. (Publ. 1941)

**291. _____ Effect of temperature on seed germination. Jour. For. 39(4): 413-414. April 1941.

292. _____ Some lesser known uses of forest seeds and fruits. Chemurgic Digest 5(5): 108. March 15, 1946.

*293. _____ Restocking black spruce swamps by planting. Tech. Note No. 256, 1 p., mimeo. July 1946.

294. _____ Viability of acorns. Amer. Nurseyman 84(12): 24-26. Dec. 15, 1946.

*295. _____ Balsam fir seed: its characteristics and germination. Sta. Paper No. 11, 13 pp., mimeo. March 1948.

296. _____ Viability of white pine seed after 10 years of storage. Jour. For. 46(12): 900-902. Dec. 1948.

297. Rudolf, P.O., and Gevorkiantz, S. R. After planting - what? Jour. For. 31(4): 441-442. April 1933.

298. _____ Review of "Tietoja Metsänviljelystoiminnasta Suomessa 1923-1930." (German Summary) "Über die Forstkulturtatigkeit in Suomi (Finland) 1923-1930." By Erkki K. Cajander. 1932. Jour. For. 32(3): 362-364. March 1934.

299. _____ Scientific foundation for reforestation. The Bulletin, Region 9, 6(4): 15-17. April 1934.

300. _____ History of forest planting in the Lake States. Minn. Conservationist. 29:12-13, 23-24. Oct. 1935.

301. _____ and Gevorkiantz, S.R. Seedlings or transplants. Jour. For. 33(12): 979-984. Dec. 1935.

302. _____ Translation of "Regeneration biology of aspen on the basis of data collected in Esthonia and Finland," by Paul Reim. (Original in German.) U.S. Forest Service Trans. No. 220, mimeo. 1935.

303. _____ Note on seed germination of European mountain ash. Jour. For. 34(5): 533-534. May 1936.

304. _____ Pedigreed trees. Minn. Conservationist 37: 4-5. June 1936.

305. _____ Lessons from past planting in the Lake States. 6 pp., mult., Aug. 1936. Jour. For. 35(1): 72-76. Jan. 1937.

306. _____ Sixty years of planting shows tree growth in Wisconsin. Wisc. Agric. & Farmer 64(4): 32-35. illus. Feb. 13, 1937.

307. _____ Delayed germination in American elm. Jour. For. 35(9): 876-877. Sept. 1937.

308. _____ Diagnosing plantation mortality. Papers Mich. Acad. Sci., Arts and Letters 23: 333-338. 1937. (Publ. 1938)

309. _____ Why forest plantations fail. Jour. For. 37(5): 377-383. May 1939.

310. _____ Further comments on "Why Forest Plantations Fail." Jour. For. 38(5): 442-443. May 1940.

311. _____ Review of "Uber Saatgutprüfung auf Biochemischem Wege (Seed-Testing by Biochemical Methods)," by Kin-Shen Hao. 1939. Jour. For. 38(12): 979. Dec. 1940.

312. _____ Review of "Fichtenformen und Fichtenrassen im Glatzer Schneegebirge (Forms and Races of Norway Spruce in the Glatz Schneegebirge)," by R. Hassenberger. 1939. Jour. For. 38(12): 979-980. Dec. 1940.

**313. _____ When are pine cones ripe? Proc. Minn. Acad. Sci. 8: 31-38, illus. 1940. (Publ. 1941)

314. _____ Post-war gopher forest program urged - 2½ million acres to plant. St. Paul Pioneer Press, Mag. Sec., p. 1. April 2, 1944.

*315. _____ Reforestation retarded by war. Tech. No. 244, 1 p., mimeo. Oct. 1945.

*316. _____ The area reforested in the Lake States. Tech. Note No. 258, 1 p., mimeo. July 1946.

*317. _____ Tree species planted in the Lake States. Tech. Note No. 265, 2 pp., mimeo. Oct. 1946.

318. _____ Mechanizing forest planting. Gopher Peavey, pp. 9-11. 1946.

319. _____ Big reforestation job ahead in central pine region. Blackduck American. April 11, 1946.

*320. _____ The reforestation job in the Lake States - a new estimate. Sta. Paper No. 4, 9 pp., mimeo. Nov. 1946. Lake States Timber Digest 1(12): 8, 10. March 13, 1947.

*321. _____ Machine-made forests. USDA Yearbook 1943-1947: 843-846.

322. _____ Plan now for planting. Blackduck American (Forest Fire Prevention Ed.), p. 14. April 24, 1947.

323. _____ Review of "Forestry Practice - A Summary of Methods of Establishing Forest Nurseries and Plantations with Advice on other Forestry Questions for Owners, Agents, and Foresters." Forest Commission Bull. 14. 91 pp. 1946. Jour. For 45(4): 297-298. April 1947.

324. _____ How much reforestation is needed in Wisconsin? Tree Tips, p. 1, 2. April 1947.

*325. _____ Measuring forest nursery stock. Tech. Note No. 275, 1 p., mimeo. April 1947.

326. _____ Wisconsin leading in reforestation. Lake States Timber Digest 1(18): 8. June 5, 1947.

327. _____ Tree species planted in Lake States. Lake States Timber Digest 1(22): 9. July 31, 1947.

328. _____ Machines for forest planting. Canadian Pulp & Paper Assoc., Woodlands Sec. Index No. 943 (F-2), 5 pp., illus. Sept. 1947.

329. _____ Minnesota needs huge tree-planting program. Minn. Conservation Volunteer 10(61): 14-17. Nov.-Dec. 1947.

*330. _____ Importance of red pine seed source. Proc. S.A.F. meeting, Dec. 17-20, 1947. pp. 384-398.

*331. _____ Local red pine seed develops best plantations. Tech. Note No. 296, 2 pp., mimeo. July 1948.

*332. _____ How about our seed supply? Jour. For. 46(10): 741-743. Oct. 1948.

*333. _____ Winter damage to Scotch pine in northern Minnesota. Tech. Note No. 305, 1 p., mimeo. Oct. 1948.

334. Shirley, Hardy L. The influence of light and temperature upon the utilization by young seedlings of organic reserves in the seed. Amer. Jour. Bot. 18: 717-727. Nov. 1931.

335. _____ Review of "Opredelenie Vskhozhesti Semian Drevesnykh Porod Metodom Okrashivania (Determination of the Germination Capacity of Forest Tree Seeds by the Dyeing Method)," by E. Y. Shafer-Safonova, M. I. Kalashnikova, and A. S. Kostromina. Jour. For. 33(6): 640-641. June 1935.

*336. _____ Seed extraction, storage and testing in Central Europe. 1 p., mult. March 1936.

*337. Baldwin, Henry I., and Shirley, Hardy L. Forest seed control. Jour. For. 34(7): 653-663. July 1936.

338. _____ and _____ A forest seed program for the United States. Jour. For. 34(8): 766-770. Aug. 1936.

*339. Shirley, H. L. Lethal high temperatures for conifers and the cooling effect of transpiration. Jour. Agr. Res. 53(4): 239-258. Aug. 15, 1936.

340. _____ The relation of drought and cold resistance to source of seed stock. Minn. Horticulturist. Feb. 1937.

341. _____ Forest Eugenics in Germany. American-German Review, pp. 9-12. March 1937.

*342. _____ Direct seeding in the Lake States. Jour. For. 35(4): 379-387. April 1937.

343. _____ Review of "The Employment of Species, Types and Individuals in Forestry," by C. Syrach Larsen. 1937. Jour. For. 35(12): 1169-1171. Dec. 1937.

*344. _____ and Meuli, Lloyd J. Influence of foliage sprays on drought resistance of conifers. Plant Physiology 13(2): 399-406. April 1938.

**345. _____ Comments on "Some New Aspects of Seed Certification," by Henry I. Baldwin. Jour. For. 37(1): 35-36. Jan. 1939.

*346. _____ and Meuli, Lloyd J. The influence of soil nutrients on drought resistance of two-year-old red pine. Amer. Jour. Bot. 26(6): 355-360. June 1939.

*347. _____ and _____ Influence of moisture supply on drought resistance of conifers. Jour. Agr. Res. 59(1): 1-22. July 1, 1939.

*348. _____ Restoring conifers to aspen lands in the Lake States. USDA Tech. Bull. 763, 36 pp., illus. March 1941.

349. Stoeckeler, J. H. The use of fertilizers in the forest nursery. Forest Worker. Jan. 1933.

350. _____ Review of "Forsök Med Vestamerikanske Traeslag (Experiments with Western North American Trees)". (German Resumé.) By Oscar Hagem. 1931. Jour. For. 32(1): 113-114. Jan. 1934.

*351. _____ and Baskin, L. C. The Denbigh disc scarifier, a new method of seed treatment. Jour. For. 35(4): 396-398. April 1937.

**352. _____ Measuring soil moisture content in the forest nursery. 4 pp., mimeo. July 30, 1937.

353. _____ Relation of size of deciduous nursery stock to field survival in the great plains. Jour. For. 35(8): 773-777. Aug. 1937.

354. _____ and Jay, James W. Some observations on Canadian nurseries and reforestation activities. Planting Quart. 7(4): 7-10. Oct. 1938.

355. _____ Experiment Station talks about conifer establishment. Plains Forester 4(9): 5-9. mimeo. Dec. 1939.

356. _____ Watering in the nursery. Plains Forester 5(2): 6-8. Feb. 1940.

**357. _____ and Sump, A. W. Successful direct seeding of northern conifers on shallow-water-table areas. Jour. For. 38(7): 572-577. July 1940.

**358. _____ and Aamodt, Einar. Use of tensiometers in regulating watering in forest nurseries. Plant Physiology 15: 589-607. illus. 1940.

*359. Engstrom, H.E., and Stoeckeler, J.H. Nursery practice for trees and shrubs suitable for planting on the prairie plains. USDA Misc. Publ. 434, 159 pp., illus. Aug. 1941.

**360. Stoeckeler, J. H., and Limstrom, G.A. Ecological factors influencing reforestation in northern Wisconsin. Ecol. Mono. 12(2): 191-212, illus. April 1942.

**361. _____ and _____ A site classification for reforestation on the national forests of Wisconsin. Jour. For. 40(4): 308-315. April 1942.

*362. _____ Nutrients in duff and humus layers increase growth of forest plantations. Tech. Note No. 226, 1 p., mimeo. Jan. 1945.

*363. _____ Brush shade increases plantation survival on droughty sites. Tech. Note No. 233, 1 p., mimeo. April 1945.

364. _____ When is plantation release most effective? Jour. For. 45(4): 265-271. April 1947.

*365. _____ Planting poorly-drained wet sites. Tech. Note No. 276, 1 p., mimeo. July 1947.

366. _____ Tree breeding material shipped to Sweden for propagation study. Tree Tips, p. 3. Jan. 1948.

*367. _____ Killing nursery weeds with oil sprays. Tech. Note No. 290, 1 p., mimeo. Jan. 1948. Amer. Nurseryman 82(9):13. Nov. 1, 1948.

368. _____ Recovery of winter injured conifers. Amer. Nurseryman 88(9): 9, 54. Nov. 1, 1948.

369. Wackerman, A. E. Cones gathered for pine seed. Minneapolis Daily Star. Jan. 10, 1924.

370. Ware, E.R. Planting and care of trees in South Dakota. So. Dak. State Coll., Ext. Circ. 356, 56 pp., illus. Feb. 1936.

371. Zehngraff, Paul. Brush away. Tree Tips, p. 4., Feb. 1948.

372. _____ Brush removal aid reforestation. Lake States Timber Digest 2(14): 12, illus. April 22, 1948.

373. Zon, Raphael. The need and development of reforestation in the United States. Proc. 14th Annual Amer. Country Life Conf., Aug. 1931. mimeo.

3. MENSURATION (GROWTH, VOLUME, YIELD, SAMPLING)

374. Anderson, Robert T. Review of "Biomathematics - Being the Principles of Mathematics for Students of Biological Science," by W. M. Feldman. 1935. Jour. For. 34(9):892 Sept. 1936.

375. _____ The application of Fourier's series in forest mensuration. Jour. For. 35(3): 293-299. March 1937.

376. Averell, James L. A special slide rule for foresters. Jour. For. 26(5): 722-723. May 1928.

377. Blythe, R.H., Jr. The chi-square test in frequency curves. Jour. For. 33(8): 759-760. Aug. 1935.

*378. _____ and Gevorkiantz, S.R. A simplified technique of constructing merchantable board foot volume tables. Volume Table Handbook, Region 9, 32 pp., mimeo. Jan. 24, 1936. Jour. Agric. Res. 55(3): 159-174. Aug. 1, 1937.

379. _____ The accuracy of plantation surveys. For. Chron. 12(1): 63-71. Feb. 1936.

380. Brown, R. M. Tables for determining the volume of black spruce. Minn. Agric. Exp. Sta. Tech. Bull. 57, 16 pp. April 1929.

381. _____ and Gevorkiantz, S.R. Volume, yield, and stand tables for tree species in the Lake States. Minn. Agric. Exp. Sta. Tech. Bull. 39, 208 pp. Rev. June 1934.

*382. Chase, Clarence D. Cumulative tallying brought up to date. Iowa State Coll. Jour. Sci. 22(4): 333-339. July 1948.

383. Duerr, W. A. Growth in uneven-aged timber stands. 11 pp., mult. March 23, 1937.

*384. _____ and Gevorkiantz, S.R. Growth prediction and site determination in uneven-aged timber stands. Jour. Agric. Res. 56(2): 81-98. Jan. 15, 1938.

*385. _____ Comments on the general application of Gehrhardt's formula for approach toward normality. Jour. For. 36(6): 600-604. June 1938.

386. Gevorkiantz, S. R. A new growth per cent formula. Jour. For. 25(1): 44-49. Jan. 1927.

387. _____ The use of canes by foresters. Jour. For. 26(8): 1064. Dec. 1928.

388. _____ and Hosley, N. W. Form and development of white pine stands in relation to growing space. Harvard Forest Bull. No. 13, 83 pp., illus. 1929.

389. _____ and Zon, Raphael. Second-growth white pine in Wisconsin. Wis. Agric. Exp. Sta. Res. Bull. 98, 40 pp., illus. June 1930.

390. _____ Determination of errors of estimate of a forest survey. USDA Forest Worker, p. 20. March 1933.

391. _____ Approach of understocked stands to normality. Jour. For. 32(4): 487-488. April 1934.

392. _____ A hypsometer for woodsmen. Jour. For. 32(5): 611-612. May 1934.

393. Mudgett, Bruce D., and Gevorkiantz, S.R. Reliability of forest surveys. Jour. Amer. Stat. Assoc. 29(187): 257-281. Sept. 1934.

394. Gevorkiantz, S.R. Review of "Forest Mensuration," by Donald Bruce and Francis X. Schumacher. 376 pp., 1935. Jour. Amer. Stat. Assoc. 30: 780. Dec. 1935.

395. _____ The statistical method in forest research. Jour. For. 33(12): 974-978. Dec. 1935.

396. _____ Determination of cubic volume in the field. Forest Research Digest, pp. 11-14. May-June 1936.

397. _____ Rules of thumb for log scaling. Jour. For. 34(6): 593. June 1936.

*398. _____ and Duerr, William A. A yield table for northern hardwoods in the lake states. Jour. For. 35(4): 340-343. April 1937.

399. _____ The approach of northern hardwood stands to normality. Jour. For. 35(5): 487-489. May 1937.

400. _____ and Duerr, William A. Methods of predicting growth of forest stands in the forest survey of the lake states. Economic Note No. 9, 59 pp., mult. April 1938.

**401. Girard, James W., and Gevorkiantz, S.R. Timber cruising. 160 pp., mult. Oct. 1939.

402. Gevorkiantz, S.R. Review of "Elementary Forest Mensuration," by M.R.K. Jerram. (With a chapter on "The Measurement of Forests," by R. Bourne.) 124 pp., illus. 1939. Jour. For. 37(11): 907. Nov. 1939.

403. _____ and Duerr, William A. Volume and yield of northern white cedar in the lake states. 55 pp., mult. 1939.

404. _____ Comments on "The Approach of Loblolly and Virginia Pine Stands Toward Normal Stocking." Jour. For. 38(6): 512-513. June 1940.

405. _____ and Ochsner, H.E. A method of sample scaling. Jour. For. 41(6): 436-439. June 1943.

**406. _____ and Zehngraff, Paul. Scaling aspen bolts by the cord. Jour. For. 41(6): 450-452. June 1943.

**407. _____ Measuring stand normality. Jour. For. 42(7): 503-508. July 1944.

**408. _____ and Scholz, Harold F. Determining site quality in understocked oak forests. Jour. For. 42(11): 808-811. Nov. 1944.

409. _____ and Aamodt, E. E. Volume-growth slide rule. Jour. For. 43(9): 652-653. Sept. 1945.

*410. _____ A composite cordwood volume table for pulpwood species in the lake states. Tech. Note No. 241, 1 p., mimeo. Oct. 1945.

*411. _____ Taper table for aspen (Populus tremuloides)--well-stocked stands. Tech. Note No. 266, 2 pp., mimeo. Jan. 1947. Lake States Timber Digest 1(10): 5. Feb. 13, 1947.

412. _____ Review of "Tables for Estimating Board-Foot Volume of Timber," by Clement Mesavage and James W. Girard. 94 pp., 1946. Jour. For. 45(1): 56. Jan. 1947.

413. _____ A handy rule-of-thumb. Jour. For. 45(2): 93. Feb. 1947.

414. _____ More about numerical expression of stocking in terms of height. Jour. For. 45(3): 203. March 1947.

*415. _____ Pulpwood volume increased by closer utilization. Tech. Note No. 274, 1 p., mimeo. April 1947. Jour. For. 45(7): 511. July 1947.

*416. _____ Growth and yield of jack pine in the lake states. Sta. Paper No. 7, 11 pp., mimeo. May 1947.

*417. _____ Converting volumes between International 1/4-inch rule and Scribner rule. Tech. Note No. 283, 1 p., mimeo. Oct. 1947. Lake States Timber Digest 2(3): 13. Nov. 6, 1947.

*418. _____ Converting volumes between International 1/4-inch rule and the Doyle rule. Tech. Note No. 287, 1 p., mimeo. Jan. 1948.

*419. _____ and Scholz, H.F. Timber yields and possible returns from the mixed-oak farmwoods of southwestern Wisconsin. Wisc. Dept. of Cons. Publ. No. 521, 72 pp., illus. Feb. 1948.

*420. _____ and Olsen, Lucille P. An improved increment-core method for predicting growth of forest stands. Sta. Paper No. 12, 19 pp., mimeo. July 1948.

*421. _____ More ties on better sites. Tech. Note No. 302, 1 p., mimeo. Oct. 1948.

422. _____ For more and better oak ties. Cross Tie Bull. 29(12): 18-20, 22, illus. Dec. 1948.

*423. Guilkey, Paul C. Preliminary report on growth factors for jack pine, black spruce, and aspen in the central pine district of Minnesota. 2 pp., mimeo. Nov. 12, 1948.

424. Kittredge, Joseph, Jr. Use of statistical methods in forest research. Jour. For. 22(3): 306-314. March 1924.

425. _____ and Gevorkiantz, S. R. Forest possibilities of aspen lands in the lake states. Minn. Agric. Exp. Sta. Tech. Bull. 60, 84 pp., illus. May 1929.

426. _____ and Chittenden, A. K. Oak forests of northern Michigan. Mich. Agric. Exp. Sta. Spec. Bull. 190, 47 pp., illus. June 1929.

427. Lake States Forest Experiment Station (Forest Survey staff). Volume tables used in connection with the forest survey. Part I, Lake States; Part II, Kansas. Economic Note No. 8, unpaged, mult. July 1937.

*428. _____ Jack pine yields per acre in Michigan, Minnesota, and Wisconsin. Tech. Note No. 3, 1 p., mimeo. May 1928.

*429. _____ Growth of northern white cedar in northern Wisconsin and Minnesota. Tech. Note No. 4, 1 p., mimeo. May 1928.

*430. _____ Amount of solid wood per cord of sticks of different diameters. Tech. Note No. 8, 1 p., mimeo. Oct. 1928.

*431. _____ Growth in swamps before and after drainage. Tech. Note No. 10, 1 p., mimeo. March 1929.

*432. _____ Open-grown trees of the same height and diameter have less volume. Tech. Note No. 36,1 p., mimeo. Feb. 1931.

*433. _____ Volume of second-growth Norway pine (board feet - International (1/8") rule). Tech. Note No. 37, 1 p., mimeo. Feb. 1931.

*434. _____ Volume of second-growth Norway pine (board feet - Scribner Dec. C.) Tech. Note No. 38, 1 p., mimeo. Feb. 1931.

*435. _____ Volume of second-growth Norway pine (cubic feet). Tech. Note No. 39, 1 p., mimeo. Feb. 1931.

*436. _____ Volume of black spruce (merchantable - cords). Tech. Note No. 40, 1 p., mimeo. Feb. 1931.

*437. _____ Volume of black spruce (cubic feet). Tech. Note No. 41, 1 p., mimeo. Feb. 1931.

*438. _____ Volume of second-growth Norway pine (board feet - International (1/8") rule). Tech. Note No. 42, 1 p., mimeo. March 1931.

*439. _____ Volume of second-growth Norway pine (board feet - Scribner Dec. C.). Tech. Note No. 43, 1 p., mimeo. March 1931.

*440. _____ Growth of hardwoods. Tech. Note No. 62, 1 p., mimeo. Feb. 1933.

*441. _____ Solid contents of standard cords (peeled black spruce pulpwood). Tech. Note No. 66, 1 p., mimeo. Nov. 1933.

*442. _____ Volume of sugar maple (board feet - Scribner). Tech. Note No. 68, 1 p., mimeo. Nov. 1933.

*443. _____ The lake states cruiser stick. Tech. Note No. 69, 2 pp., mimeo., illus. Nov. 1933.

*444. _____ Jack pine normal stand tables. Tech. Note No. 70, 1 p., mimeo. Nov. 1933.

*445. _____ Aspen normal stand tables. Tech. Note No. 71, 1 p., mimeo. Nov. 1933.

*446. _____ Determining volumes without volume tables. Tech. Note No. 72, 1 p., mimeo. Nov. 1933.

*447. _____ Stand and yield table for jack pine. Tech. Note No. 73, 1 p., mimeo. May 1934.

*448. _____ How much solid wood in a cord? Tech. Note No. 74, 1 p., mimeo. May 1934.

*449. _____ Scaling cull in standing trees in board feet, Scribner rule. Tech. Note No. 107, 1 p., mimeo. Jan. 1936.

*450. _____ Bark thickness of saw-timber trees in Michigan. Tech. Note No. 108, 1 p., mimeo. Jan. 1936.

*451. _____ Volume of plantation cottonwood (board feet, Scribner). Tech. Note No. 112, 1 p., mimeo. May 1936.

*452. _____ Peeled volume of plantation cottonwood (cubic feet). Tech. Note No. 113, 1 p., mimeo. May 1936.

*453. _____ Conversion of tree volumes from Scribner to International 1/4" rule. Tech. Note No. 114, 1 p., mimeo. May 1936.

*454. _____ Effect of utilization standards on pulpwood yield. Tech. Note No. 150, 1 p., mimeo. April 1939.

*455. _____ Pulpwood volume losses due to peeling and shrinkage. Tech. Note. No. 151, 1 p., mimeo. April 1939.

*456. _____ Taper table for jack pine (Pinus banksiana) - Lake States. Tech. Note No. 155, 1 p., mimeo. April 1939.

*457. _____ Short cuts in scaling: I. Measuring sample truck loads. Tech. Note No. 181, 1 p., mimeo. March 1942.

*458. _____ Short cuts in scaling: II. Using stacked dimensions to obtain board-foot volume. Tech. Note No. 182, 1 p., mimeo. March 1942.

*459. _____ Short cuts in scaling: III. Measuring sample logs. Tech. Note No. 183, 1 p., mimeo. March 1942.

*460. _____ Volume of fuelwood in tree tops. Tech. Note No. 184, 1 p., mimeo. March 1942.

*461. _____ Cordwood volume table for hardwoods. Tech. Note No. 185, 1 p., mimeo. March 1942.

*462. _____ Yields from tie bolts. Tech. Note No. 194, 1 p., mimeo. Feb. 1943.

*463. _____ How many pulpwood bolts per cord? Tech. Note No. 197, 1 p., mimeo. Feb. 1943.

*464. _____ Taper table I - basswood. Tech. Note No. 198A, 1 p., mimeo. Feb. 1943.

*465. _____ Taper table II - elm. Tech. Note No. 198B, 1 p., mimeo. Feb. 1943.

*466. _____ Taper table III - oak, red and white. Tech. Note No. 198C, 1 p., mimeo. Feb. 1943.

*467. _____ Taper table IV - sugar maple. Tech. Note No. 198D, 1 p., mimeo. Feb. 1943.

*468. _____ Taper table V - yellow birch. Tech. Note No. 198E, 1 p., mimeo. Feb. 1943.

*469. _____ A composite cordwood volume table for the lake states. Tech. Note No. 202, 1 p., mimeo. Aug. 1943.

*470. _____ Composite board foot volume tables for the lake states. Tech. Note No. 203, 2 pp., mimeo. Aug. 1943.

*471. _____ Overrun of lumber from aspen bolts. Tech. Note No. 215, 1 p., mimeo. April 1944.

*472. _____ Quick field-calculator of volume and growth of trees. Tech. Note No. 225, 2 pp., mimeo., illus., Aug. 1944.

473. Macon, John W., and Gevorkiantz, S.R. Estimating volume on the spot. Jour. For. 40(8): 652-655. Aug. 1942.

474. Scholz, Harold F. Diameter outside bark as an index of bark thickness at breast height for red and chestnut oak. Black Rock Forest Papers 1(8): 50-52. Jan. 1937.

*475. Stoeckeler, J. H. Yield table for cottonwood plantations. Tech. Note No. 268, 1 p., mimeo. Jan. 1947.

476. Wackerman, A. E. Growth of the "Grayling pine." Jour. For. 22(7): 796-797. Nov. 1924.

*477. _____ Jack pine - the Cinderella of the Lake States. Amer. Lumberman 2613: 61. June 13, 1925.

*478. _____, Zon, Raphael, and Wilson, F. G. Yield of jack pine in the lake states. Wisc. Agric. Exp. Sta. Res. Bull. 90, 23 pp., illus. March 1929.

*479. Zehngraff, Paul J. How many small fence posts to a cord? Tech. Note No. 269, 1 p., mimeo. Jan. 1947. Timber Prod. Assoc. Monthly Bull. (Duluth) 3(8): 18. April 1948.

*480. _____ Yields of aspen in unmanaged stands. Tech. Note No. 300, 1 p., mimeo. July 1948.

481. Zon, Raphael, and Scholz, H. F. How fast do northern hardwoods grow. Wisc. Agric. Exp. Sta. Res. Bull. 88, 34 pp., illus. 1929.

4. PROTECTION

a. Fire

*482. Crosby, John S. October 1947 drought conditions cause high forest fire danger in the Lake States. Tech. Note No. 286, 2 pp., mimeo., illus. Jan. 1948.

*483. Lake States Forest Experiment Station. How long does hardwood slash remain a fire menace? Tech. Note No. 21, 1 p., mimeo. Jan. 1930.

*484. _____ Selective logging and close utilization-a solution to the slash problem in northern hardwoods. Tech. Note No. 31, 1 p., mimeo. Feb. 1931.

*485. _____ Fire hinders conversion of aspen to pine and spruce. Tech. Note No. 34, 1 p., mimeo. Feb. 1931.

*486. _____ Spring fires on the jack pine plains. Tech. Note No. 44, 1 p., mimeo. Dec. 1931.

*487. _____ Test of portable hand power fire pumps. Tech. Note No. 47, 1 p., mimeo. Dec. 1931.

*488. _____ Comparative merits of different portable hand power fire pumps. Tech. Note No. 48, 1 p., mimeo. Dec. 1931.

*489. _____ How soon after a fire can damage be determined? Tech. Note No. 57, 1 p., mimeo. Feb. 1933.

*490. _____ Fire damage as affected by season of burning. Tech. Note No. 58, 1 p., mimeo. Feb. 1933.

*491. _____ Slash disposal - jack pine. Tech. Note No. 59, 1 p., mimeo. Feb. 1933.

*492. _____ Estimating fire damage in the lake states. Tech. Note No. 75, 1 p., mimeo. May 1934.

*493. _____ Damage to advance growth by slash disposal. Tech. Note No. 77, 1 p., mimeo. May 1934.

*494. _____ Relative hazard and estimated cost of protection by forest types - Lake States. Tech. Note. No. 78, 1 p., mimeo. May 1934.

*495. _____ Use of calcium chloride in forest fire control. Tech. Note No. 83, 1 p., mimeo. May 1934.

*496. _____ Effect of spring fires on sprout oak stands. Tech. Note No. 120, 1 p., mimeo. May 1936.

*497. _____ Twenty-five years of forest fires in the Lake States. Tech. Note No. 154, 1 p., mimeo. April 1939.

*498. _____ More effective measurement of forest fire danger. Tech. Note No. 199, 1 p., mimeo. Feb. 1943.

*499. _____ Disking reduces slash fire hazard in the jack pine type. Tech. Note No. 217, 1 p., mimeo., illus. April 1944.

500. LeBarron, R. K. The role of forest fires in the reproduction of black spruce. Proc. Minn. Acad. Sci. 7: 10-14. 1939. (Publ. 1940)

501. Mitchell, J. A. That "harmless" forest fire. Review of USDA Bull. 1294, "The Role of Fire in the California Pine Forests," by S. B. Show and E. I. Kotok. 80 pp. 1924. Amer. Lumberman 2601: 76. March 21, 1925.

502. _____ Fire weather forecasting. Development Bureau News. 1926.

503. _____ Precipitation and forest fires in northern Minnesota. Jour. For. 24(5): 507-510. May 1926.

504. _____ Forest fires in Minnesota. Smoke Screen. April 1927.

505. _____ Forest fires in Minnesota. Minn. Forest Service Bull., 74 pp., illus. Feb. 1928.

506. _____ Forest fire hazard as affected by weather conditions, forest type, and density of cover. Wisc. Agric. Exp. Sta. Res. Bull. 91, 26 pp., illus. April 1929.

**507. _____ and Sayre, H. R. Forest fires in Michigan. Mich. Dept. of Cons. Bull., 65 pp., illus. 1929.

508. _____ and Stewart, G. I. The Michigan forest fire experiment station - what it is and what it is doing. Mich. Dept. of Cons. Bull., 45 pp., illus. 1932.

509. _____ Cover type as a factor in fire control. Jour. For. 32(1): 96-97. Jan. 1934.

510. _____ More about calcium chloride as a fire retardant. Jour. For. 33(1): 84-86. Jan. 1935.

*511. _____ and Richman, H. W. Probability of rainfall during the fire season in the Lake States region. 21 charts, mult. Aug. 1936.

**512. _____ The rating of forest-fire danger. Papers Mich. Acad. Sci., Arts & Letters 23: 325-332. 1937. (Publ. 1938)

513. _____ Accomplishments in fire protection in the Lake States. Jour. For. 37(9): 748-750. Sept. 1939.

514. _____ A fire-dispatching guide for use in the Lake States. Fire Control Notes 6(1): 16-18. illus. Jan. 1942.

*515. _____ Forest fire control pays. Tech. Note No. 242, 2 pp., mimeo. Oct. 1945.

*516. _____ Forest fires in the Lake States in 1946. Tech. Note No. 280, 2 pp., mimeo. July 1947.

*517. _____ Forest fires in Indiana. Jour. For. 45(8): 570-574. Aug. 1947.

518. _____ Forest fire statistics: their purpose and use. Fire Control Notes 8(4): 14-17. Oct. 1947.

519. _____ Fire loss in Lake States area. Lake States Timber Digest 2(2): 10. Oct. 23, 1947.

*520. _____ The 1947 forest fire season in the Lake States. Tech. Note No. 295, 2 pp., mimeo. April 1948.

521. _____ Fire damage appraisal. Fire Control Notes 9 (2&3): 27-30. April & July 1948.

522. Scholz, H. F. How long does hardwood slash remain a fire menace? Jour. For. 28(4): 568. April 1930.

523. Zon, Raphael, and Cunningham, Russell N. Logging slash and forest protection. Wisc. Agric. Exp. Sta. Res. Bull. 109, 36 pp., illus. March 1931.

b. Insects and Diseases

524. Averell, James L. Review of "Armillaria Mellea (Vahl) Quel., Cause Du Dessechement Des Forêts De Chêne En Yougoslavie (Armillaria mellea (Vahl) Quel., As the Cause of the Drying-Up of the Oak Forests in Jugo-Slavia)," by Pierre Georgévitch. 1926. Jour. For. 26(3): 367-369. March 1928.

525. Gevorkiantz, S. R. Guide for estimating defect in northern hardwoods. Jour. For. 45(2): 128-130. Feb. 1947.

526. Graham, S. A. Forest entomological problems in the Lake States. Jour. For. 22(1): 24-28. Jan. 1924.

527. _____ The felled tree as an ecological unit. Ecology 6(4): 397-411. 1925.

528. _____ Two dangerous defoliators of jack pine. Jour. Econ. Ent. 18(2): 337-345. 1925.

529. _____ The fight on forest pests in the Lake States. Amer. Lumberman 2662: 61-62, illus. 1926.

530. _____ Biology and control of the white pine weevil, Pissodes strobi Peck. Cornell Agric. Exp. Sta. Bull. 449, 32 pp., illus June 1926.

531. _____ and Baumhofer, Lynn G. The pine tip moth in the Nebraska national forest. Jour. Agric. Res. 35(4): 323-333. Aug. 15, 1927.

532. Rudolf, P. O. A weevil-resistant strain of jack oak. Jour. For. 30(6): 749-750. Oct. 1932.

533. _____ Review of "Klucz Do Oznaczania Wazniejszych Szkodliwych Owadow Lesnych (Key for the Identification of Important Forest Insect Pests)," by Dr. Marjan Nunberg. 288 pp., illus. 1935. Jour. For. 33 (11): 949-950. Nov. 1935.

*534. Scholz, Harold F. Treated paper birch and aspen posts give good service. Tech. Note No. 246, 1 p., mimeo. Jan. 1946.

**535. Hodson, A. C., and Zehngraff, P. J. Budworm control in jack pine by forest management. Jour. For. 44(3): 198-200. March 1946.

*536. Zillgitt, W. M. A quick method of estimating cull in northern hardwood stands. Tech. Note No. 255, 1 p., mimeo. April 1946.

*537. _____ and Gevorkiantz, S. R. Estimating cull in northern hardwoods. Sta. Paper No. 3, 7 pp., mimeo. Nov. 1946. Lake States Timber Digest 1(10): 12-13. Feb. 13, 1947.

*538. _____ and _____ Estimating cull in northern hardwoods with special reference to sugar maple. Jour. For. 46(8): 588-594. Aug. 1948.

c. Wildlife

539. Aldous, C. M. Are all hawks and owls detrimental? Minn. Conservationist. Aug. 1933.

540. _____ The possibilities of the Red Lake wildlife refuge. Minn. Conservationist. Jan. 1934.

541. _____ The protectors of our game and fish resources. Minn. Conservationist. July 1935.

542. _____ The last of the caribou. National Waltonian 3(3). Sept. 1935.

543. _____ Notes on the life history of the snowshoe hare. Jour. Mamm. 18(1): 46-57. Feb. 1937.

544. Aldous, Shaler E. A hibernating black bear with cubs. Jour. Mamm. 18(4): 466-468. Nov. 1937.

545. _____ It's an ill wind that blows no good. Minn. Conservationist 54: 33. Feb. 1938.

546. _____ and Smith, Clarence F. Food habits of Minnesota deer as determined by stomach analysis. Trans. Third North Amer Wildlife Conf., Feb. 14-17, 1938, Baltimore, Md., pp. 756-767.

547. _____ Beaver food utilization studies. Jour. Wildlife Man. 2(4): 215-222. illus. Oct. 1938.

548. _____ Pine in the diet of white-tailed deer. Jour. For. 37(3): 265-267. March 1939.

549. _____ and Smith, Clarence F. Fall and winter food habits of deer in northeastern Minnesota. Bur. Biol. Surv., Wildlife Res. & Man. Leaflet BS-137, 10 pp., mimeo. May 1939.

550. _____ Notes on a black-footed ferret raised in captivity. Jour. Mamm. 21(1): 23-26. Feb. 14, 1940.

551. _____ A method of marking beavers. Jour. Wildlife Man. 4(2): 145-148. illus. April 1940.

552. _____ Deer management suggestions for northern white cedar types. Jour. Wildlife Man. 5(1): 90-94, illus. Jan. 1941.

553. _____ Food habits of chipmunks. Jour. Mamm. 22(1): 18-24. Feb. 14, 1941.

554. _____ The white-necked raven in relation to agriculture. USDI, Fish & Wildlife Service, Res. Report 5, 56 pp., illus. 1942.

555. Aldous, Clarence M., and Aldous, Shaler E. The snowshoe hare - a serious enemy of forest plantations. Jour. For. 42(2): 88-94. Feb. 1944.

556. Harris, Dave, and _____ Beaver management in the northern black hills of South Dakota. Jour. Wildlife Man. 10(4): 348-353. 1946.

557. Aldous, Shaler E., and Krefting, Laurits W. The present status of the Isle Royale moose. Trans. Eleventh North Amer. Wildlife Conf., pp. 296-308. 1946.

558. _____ Live trapping and tagging muskrats. Jour. Wildlife Man. 10(1): 42-44. Jan. 1946.

*559. _____ Jack pine regeneration retarded by rodents and birds. Tech. Note No. 259, 1 p., mimeo. July 1946.

*560. _____ Some forest - wildlife problems in the Lake States. Sta. Paper No. 6, 11 pp., mimeo. Jan. 1947.

561. Smith, Clarence F., and Aldous, Shaler E. The influence of mammals and birds in retarding artificial and natural reseeding of coniferous forests in the United States. Jour. For. 45(5): 361-369. May 1947.

562. Vesall, D.B., Nyman, R.W., and Gensch, R.H. The relation of beaver to swamp timber management in Koochiching County, Minnesota. Proc. S.A.F. meeting, Dec. 17-20, 1947. pp. 195-200.

563. Krefting, Laurits W., and Bramer, Alton. Wildlife Conservation at Grand Portage. USDI, Indian Service, Indians at Work, pp 19-21, illus. Sept.-Oct. 1944.

*564. Lake States Forest Experiment Station. By the forests ye shall know the birds. Tech. Note No. 27, 1 p., mimeo. Sept. 1930.

*565. _____ Control of rabbit injury. Tech. Note No. 82, 1 p., mimeo. May 1934.

*566. _____ Woody food preferences of the snowshoe rabbit in the Lake States. Tech. Note No. 109, 1 p., mimeo. Jan. 1936.

*567. _____ Rabbits cause great losses to plantations in brushy areas. Tech. Note No. 116, 1 p., mimeo. May 1936.

*568. _____ Damage from rabbits - a consideration in shelterbelt planting. Tech. Note No. 121, 1 p., mimeo. Jan. 1937.

*569. _____ Food habits of Minnesota deer. Tech. Note No. 133, 1 p., mimeo. Feb. 1938. Also appeared under title "Deer Food Conditions," Wisc. Cons. Bull. 3(4): April 1938.

*570. _____ White cedar for deer food. Tech. Note No. 159, 1 p., mimeo. May 1940.

*571. _____ The animal factor in natural reproduction of jack pine. Tech. Note No. 172, 1 p., mimeo. Jan. 1941.

572. LeBarron, Russell K., and Aldous, Shaler E. Jack pine vs. deer browse. Minn. Cons. Volunteer 8(48): 23-24. Sept.-Oct. 1945.

5. FOREST SURVEY (FOREST RESOURCES)

*573. Chase, Clarence D. Aspen availability and supply. Lake States Aspen Report No. 2, 15 pp., mult. June 1947.

574. _____ Forest survey is key to our forest and industrial planning. Blackduck American 47(20): 14. April 15, 1948.

*575. _____ Timber resources, Marquette County, Michigan, 1947. Mich. Dept. Conservation, 51 pp., mult. 1948.

576. Cunningham, R. N. The land economic surveys in the Lake States. Utah Juniper 2: 7-10. 1931.

577. _____ Taking stock of Minnesota forests. Minn. Conservationist, p. 8. Oct. 1933.

578. _____ Minnesota forests - an inventory. Minn. Conservationist. July 1935.

579. _____ and Moser, H. C. New forest statistics for Lake States. Hardwood Record. June 1936. 5 pp., mult. June 19, 1936.

580. _____ Status of forest survey in the Lake States. 14 pp., mult., illus. April 1937.

581. _____ and Moser, H. C. Forest areas and timber volumes in the Lake States. Economic Note No. 10, 84 pp., mult. March 1938.

582. _____ and _____ The forests of Minnesota (A preliminary report). 122 pp., mult. 1938.

583. _____ Preliminary figures from Lake States forest survey. Jour. For. 37(1): 66-69. Jan. 1939.

584. _____, Moser, H. C., and White, H. G. Timber supplies, growth, and depletion in the three Lake States. Economic Note No. 11, 12 pp., mimeo. Aug. 1939.

585. _____ The meaning of the Lake States forest survey. Jour. For. 37(9): 698-700. Sept. 1939.

*586. _____ and White, H. G. Forest resources of the upper peninsula of Michigan. USDA Misc. Publ. 429, 32 pp., illus. July 1941.

587. _____ Fuelwood shortage in Lake States revealed as critical situation. Miss. Valley Lumber. 74(39): 23. 1943.

588. _____ Maximum output of northern Minnesota mills needed to help satisfy heavy lumber demands. Miss. Valley Lumber. 74(10): 7-8. March 5, 1943.

589. _____ Past year's Lake States producer problems reviewed. Miss. Valley Lumber. 75(4): 9-10. Jan. 28, 1944.

590. _____ Research in wood supplies vital to Lake States pulp and paper industry. Paper Mill News 67(39): 108, 110, 114. illus. Sept. 23, 1944.

*591. _____ Minnesota pole requirements heavy. Tech. Note No. 243, 1 p., mimeo. Oct. 1945.

592. _____ Minnesota forest industries facing problems of immediate reconversion. Miss. Valley Lumber. 76(42): 7, 19. Oct 19, 1945.

*593. _____ The present forestry situation in the Lake States. Reprint from School Sci. & Math., pp. 365-373, May 1948. Lake States Timber Digest 2(20): 3-4, 8-9. July 15, 1948.

594. _____ Ownership and availability of Lake States pulpwood. Paper Trade Jour. 127(2): 37-39. July 8, 1948.

*595. Demmon, E. L. Lake States forests and the pulp and paper industry. Sta. Paper No. 5, 10 pp., mimeo. Dec. 1946. Lake States Timber Digest 2(2): 3, 4. Oct. 23, 1947. Lake States Timber Digest 2(3): 6, 12. Nov. 6, 1947.

596. _____ Available pulp timber stands in the Lake States. Tappi Monog. Series No. 4, "Pulpwood: Stands, Procurement, and Utilization," pp. 40-51. 1947.

*597. Hall, Robert T., and Dickerman, M.B. Wood fuel in wartime. USDA Farmers' Bull. 1912, 22 pp., illus. July 1942.

598. Dickerman, M. B. The slack cooperage industry in Minnesota and Wisconsin in light of increased wartime requirements for wooden barrels. Economic Note No. 15, 10 pp., mult. May 1942.

**599. Bull, W. Ira, and Dickerman, M.B. How Michigan can supply wood for war industries. Mich. State Coll. Ex. Folder F-69. Feb. 1944.

600. Holcomb, Carl J., and Bull, W. Ira. Directory of sawmills and other primary wood-using industries in Mich. Mich. State Coll. Bull., 47 pp. June 1942.

601. Horn, A. G. 4,120,000 cross ties produced in Lake States in 1944. Cross Tie Bull. 26(3): 9-10, 12, 32. Mar. 1945.

*602. _____ Cross tie production in the Lake States. Tech. Note No. 236, 1 p., mimeo. July 1945.

*603. _____ Most Lake States lumber now produced by smaller sawmills. Tech. Note No. 252, 1 p., mimeo. April 1946. Cross Tie Bull. 27(5): 18. May 1946. Forestry News 1(3): 11-12. July 1946.

604. _____ Veneer log production in the Lake States continues at high level. Tech. Note No. 284, 2 pp., mimeo. Oct. 1947.

*605. _____ Aspen takes lead as pulping species in Lake States. Tech. Note No. 288, 2 pp., mimeo. Jan. 1948.

**606. Sandberg, Lynn, and Horn, A.G. The forest resource of Crow Wing County. Iron Range Res. & Rehab., 64 pp., illus. n.d. (1948). Lake States Timber Digest 2(19): 6, 16. July 1, 1948. Lake States Timber Digest 2(20): 10, 11, 14. July 15, 1948.

*607. Horn, A. G. Lake States operators increase cut of excelsior wood - 1946. Tech. Note No. 294, 1 p., mimeo. April 1948.

608. _____ Distribution of sawmills and lumber production in northern Minnesota. Lake States Timber Digest 2(26): 6. Oct. 7, 1948.

*609. _____ Lake States pulpwood production declines in 1947. Tech. Note No. 301, 2 pp., mimeo. Oct. 1948. Lake States Timber Digest 3(2): 6. Nov. 4, 1948.

**610. Johnson, Richard C. The outlook for agricultural veneer containers in southern Michigan. Economic Note No. 20, 11 pp., mult. May 1944.

611. _____ The agricultural veneer container industry in southern Michigan. Mich. Agr. Exp. Sta. Quar. Bull. 27(3): 1-10. Feb. 1945.

*612. Kluender, William A. Fuelwood production lags in Wisconsin. Tech. Note No. 239, 2 pp., mimeo. July 1945.

*613. Lake States Forest Experiment Station. Forest surveys an aid to sustained yield production. Tech. Note No. 85, 1 p., mimeo. May 1934.

614. _____ The forests of Minnesota: area and types. Economic Note No. 1, 24 pp., mimeo. May 1, 1935.

615. _____ Forest situation in the Cloquet-Superior district, Minnesota. Economic Note No. 2, 16 pp. + 20 tables, mult. July 15, 1935.

*616. _____ Forest areas in Minnesota. Tech. Note No. 93, 1 p., mimeo. Aug. 1935.

617. _____ The forest situation in the central pine district, Minnesota. Economic Note No. 3, 19 pp. + 17 tables, mult. Oct. 1935.

*618. _____ Fuelwood more valuable than lumber in Minnesota. Tech. Note No. 110, 1 p., mimeo. Jan. 1936.

*619. _____ Millions of posts needed to repair Minnesota fences. Tech. Note No. 111, 1 p., mimeo. May 1936.

620. _____ Introduction to reports of the forest survey of the Lake States: purpose, methods, standards, and definitions. Economic Note No. 4, 24 pp., mult. May 1936.

621. _____ Forest areas and timber volumes in Michigan. Economic Note No. 5, 40 pp., mult. June 1936.

622. _____ The forest situation in the hardwood and prairie districts of Minnesota. Economic Note No. 6, 60 pp., mult. July 1937.

*623. _____ Fence posts a million-dollar crop in Michigan. Tech. Note No. 127, 1 p., mimeo. Sept. 1937. Jour. For. 36(5): 525. May 1938.

*624. _____ Ten million dollars worth of lumber produced in Wisconsin, 1938. Tech. Note No. 163, 1 p., mimeo. May 1940.

*625. _____ Production of lumber, lath, and shingles in Minnesota, 1940. Tech. Note No. 178, 1 p., mimeo. June 1941.

*626. _____ Production of lumber, lath, and shingles in Wisconsin, 1940. Tech. Note No. 179, 1 p., mimeo. Aug. 1941.

*627. _____ Production of lumber, lath, and shingles in Michigan, 1940. Tech. Note No. 180, 1 p., mimeo. Aug. 1941.

*628. _____ Michigan lumber production largest since 1929. Tech. Note No. 191, 2 pp., mimeo. July 1942.

*629. _____ Minnesota lumber cut largest in eleven years. Tech. Note No. 192, 2 pp., mimeo. July 1942.

*630. _____ War demands strain Wisconsin saw-timber resources. Tech. Note No. 193, 2 pp , mimeo. July 1942.

*631. _____ Hemlock tanbark production should be increased. Tech. Note No. 195, 1 p., mimeo. Feb. 1943.

*632. _____ Farmer custom sawing is increasing. Tech. Note No. 201, 1 p., mimeo. Aug. 1943.

*633. _____ Estimated lumber production 1942, Lake States. Tech. Note No. 204, 2 pp., mimeo. Aug. 1943.

*634. _____ Estimated lumber production 1942, Michigan. Tech. Note No. 205, 2 pp., mimeo. Aug. 1943.

*635. _____ Estimated lumber production 1942, Minnesota. Tech. Note No. 206, 2 pp., mimeo. Aug. 1943.

*636. _____ Estimated lumber production 1942, Wisconsin. Tech. Note No. 207, 2 pp., mimeo. Aug. 1943.

*637. _____ Lake States lumber production off 34 percent in 1943. Tech. Note No. 208, 2 pp., mimeo. Aug. 1943.

*638. _____ 1943 lumber production lagging in Minnesota. Tech. Note No. 209, 2 pp., mimeo. Aug. 1943.

*639. _____ Michigan lumber production declines in 1943. Tech. Note No. 210, 2 pp., mimeo. Aug. 1943.

*640. _____ Wisconsin sawmills cutting less lumber in 1943. Tech. Note No. 211, 2 pp., mimeo. Aug. 1943.

*641. _____ Michigan not cutting enough fuelwood. Tech. Note No. 212, 1 p., mimeo. Sept. 1943.

*642. _____ Fuelwood scarce in Wisconsin. Tech. Note No. 213, 1 p., mimeo. Sept. 1943.

*643. _____ Minnesota faces fuelwood shortage. Tech. Note No. 214, 1 p., mimeo. Sept. 1943.

*644. _____ A new trend in small sawmill operation. Tech. Note No. 216, 1 p., mimeo. April 1944.

*645. _____ Elimination of seasonal variation in lumber production - a hopeful trend. Tech. Note No. 221, 1 p., mimeo. April 1944.

**646. _____ Revised forest statistics for the Lake States, 1945. Sta. Paper No. 1, 27 pp., mimeo. Sept. 1946.

647. Macon, John W., Moser, H. C., and Cunningham, R. N. Forestry possibilities of Carlton County, Minnesota. Economic Note No. 13, 36 pp., mimeo. Dec. 1940.

648. _____ and Diemer, Jack A. The forest situation in Oneida County, Wisconsin. Economic Note No. 14, 27 pp., mult., illus. July 1941.

649. _____ The contribution of the Lake States hardwood distillation industry to our war effort. Economic Note No. 16, 14 pp., mult. May 1942.

650. _____ The forest situation in Burnett County, Wisconsin. Economic Note No. 17, 20 pp., mult., illus. June 1942.

651. Moore, Francis I., and Huey, Ben M. The fuel-wood outlook in Minnesota, 1943. Economic Note No. 19, 16 pp., mimeo. March 1943.

652. Neetzel, John R. Southern Minnesota produces 54.2 million feet of lumber in 1946. Miss. Valley Lumber. 78(8): 9. Feb. 21, 1947.

*653. _____ Small sawmills cut much lumber in southern Minnesota. Tech. Note No. 289, 2 pp., mimeo. Jan. 1948.

654. _____ Distribution of sawmills and lumber production in southern Minnesota. Lake States Timber Digest 2(26): 6. Oct. 7, 1948.

*655. _____ Distribution of Minnesota farm woodland. Tech. Note No. 303, 2 pp., mimeo., illus. Oct. 1948.

*656. Olsen, Lucille P. Minnesota sustains high level lumber production in 1946. Tech. Note No. 273, 1 p., mimeo. April 1947.

*657. _____ Wisconsin lumber production increased in 1946. Tech. Note No. 272, 1 p., mimeo. April 1947.

*658. _____ 1946 Michigan lumber production continues at high level. Tech. Note No. 271, 1 p., mimeo. April 1947.

659. Sands, Waldo M. Utilization of hemlock bark for tanning in the Lake States. Hide & Leather & Shoes 110(2). July 14, 1945.

660. _____ Nine suggestions for increasing efficiency of small mills to meet postwar competition in lumber markets. Miss. Valley Lumber. 77(15): 7. April 12, 1946. Timber Prod. Assoc. (Minn.) Monthly Bull. 1(10): 2-3. June 1946.

661. _____ Oak on the high seas. Amer. Forests 52(6): 276-277. June 1946.

662. _____ Michigan furniture company attempts production of dimension stock from slabs. Furniture Manufacturer 62(3): 22, 57. March 1947.

*663. _____ Aspen for containers. Lake States Aspen Report No. 10, 12 pp., mult. July 1947.

*664. Scholz, Harold F. Oak is the favorite tie species in southern Wisconsin. Tech. Note No. 227, 1 p., mimeo. Jan. 1945.

*665. _____ Tie production important in southwestern Wisconsin. Tech. Note No. 232, 1 p., mimeo. April 1945.

666. Ware, E. R. Forests of South Dakota; their economic importance and possibilities. 20 pp., mult. 1936.

*667. _____ and Smith, Lloyd F. Woodlands of Kansas. Kans. Agr. Exp. Sta. Bull. 285, 42 pp., illus.

668. Wijkstrom, Stig. Sample plot method of the Minnesota land economic survey for determining growth and yield. Jour. For. 28(5): 734-738. May 1930.

669. Zon, Raphael The need of an organization for the collection of forest statistics. Cornell Forester 1923.

670. _____ and Sparhawk, W. N. Forest resources of the world. 2 v., illus. New York. 1923.

**671. Amidon, George B. and LeBarron, Russell K. To what top diameter can spruce pulpwood be cut profitably? Pulp and Paper Mag. of Canada 45(10): 756-758. Sept. 1944.

672. Cunningham, R. N., and Frank, Bernard. Tax delinquency and the cut-over land problem in Minnesota. Chap. 5 of "Taxation in Minnesota," by Roy G. Blakey, et al. Univ. of Minn., Studies in Economics and Business, No. 4. Nov. 1932.

673. _____ Foresters and land use planning. Michigan Forester 14: 34-35, 44. 1933.

674. _____ Review of "Land Use in Minnesota," by Governor's Committee on Land Use, and "A Program for Land Use in northern Minnesota," by O. B. Jesness, Reynolds I. Nowell and associates. Jour. For. 33(7): 700-701. July 1935.

675. _____ Land to spare - a conservation problem in the Lake States. USDA Yearbook 1935: 238-241.

*676. _____ What is wrong with the farmwoods? Amer. Forests 44(7): 310. July 1938.

677. _____ Some outlets for Minnesota farm-forest products 5 pp., mimeo. (Prepared in connection with a talk before Farmers and Home-makers Meeting, Feb. 1939.)

*678. Allison, J. H., and Cunningham, R. N. Timber farming in the Cloquet district. Minn. Agr. Exp. Sta. Bull. 343, 35 pp., illus. July 1939.

679. Cunningham, R. N. Impact of war on our forests. Land Policy Review (BAE) 7(3): 26-30. Fall 1944.

680. Demmon, E. L. Review of "Living by the Land: Conservation with Special Reference to Proper Use of the Land," by John C. Gifford. 1945. Jour. For. 45(7): 519. July 1947.

681. Dickerman, M. B. The cooperative association as a wartime aid to the small producer of forest products. Economic Note No. 18, 49 pp., mult. July 1942.

682. Duerr, William A., and Stoddard, Charles H., Jr. Results of a commercial selective cutting in northern hemlock-hardwoods. Jour. For. 36(12): 1224-1230. Dec. 1938.

683. Eyre, F. H. Common-sense appraisals for small timber sales. Service Bull. 23: 3-4. April 17, 1939.

684. _____ Good wages can be earned in thinning young jack pine for pulpwood. Wisc. Cons. Bull. 9(7): 5-6. July 1944.

685. Frank, Bernard. Progress of the Norwegian agricultural and forest credit society; significance for American farm forestry. Jour. For. 30(7): 856-859. Nov. 1932.

686. _____ Wooded pastures vs. pastured woods. Service Bull., Jan. 1933.

687. _____ Periodic land use studies for more effective planning. Jour. For. 32(4): 425-429. April 1934.

*688. Gevorkiantz, S.R., and Zehngraff, Paul. More box lumber from small aspen bolts. Miss. Valley Lumber. 75(25): 10-12. June 23, 1944.

*689. _____, Kilp, F.G., Dosen, R.C., and Schmidt, O.A. A method of evaluating land for pulpwood production. Jour. For. 46(9): 674-678. Sept. 1948.

690. Holcomb, Carl J., and Herbert, Paul A. Availability of farm timber for Michigan's wood-using industry. Mich. Agr. Exp. Sta. Quart. Bull. 25(4): 356-360. May 1943.

691. _____ Marketing farm timber in Michigan. Mich. Agr. Exp. Sta. Quart. Bull. 25(4): 350-355. May 1943.

692. _____ and Herbert, Paul A. Michigan's wood-using industry. Mich. Agr. Exp. Sta. Quart. Bull. 26(1): 25-31. Aug. 1943.

*693. Horn, Arthur G., and Scholz, Harold F. Postwar problems of the cross tie industry in the Lake States. Sta. Paper No. 2, 14 pp., mimeo. Sept. 1946.
Lake States Timber Digest 1(21): 3-4,8. July 17, 1947.
" " " " 1(22): 10-13. July 31, 1947.

694. Johnson, R.P.A., Kittredge, Joseph, Jr., and Schmitz, Henry. Aspen availability, properties, and utilization. Minn. Agric. Exp. Sta. Tech. Bull. 70, 72 pp., illus. Aug. 1930.

695. Kluender, W. A. New market for aspen logs in furniture making. Miss. Valley Lumber. 76(51): 31. Dec. 21, 1945.

*696. Lake States Forest Experiment Station. Returns from selective logging. Tech. Note No. 11, 1 p., mimeo. March 1929.

*697. _____ How much does it cost to thin? Tech. Note No. 20, 1 p., mimeo. Oct. 1929.

*698. _____ The future of aspen in the Lake States. Tech. Note No. 50, 1 p., mimeo. Dec. 1931.

699. _____ Water and mineral resources as related to land use. Chap. 9, "Land Utilization in Minnesota," pp. 149-162. 1934.

*700. _____ Ownership and use of land determine tax delinquency. Tech. Note No. 86, 1 p., mimeo. May 1934.

*701. _____ Woods and mill cull in merchantable hardwoods. Tech. Note No. 94, 1 p., mimeo. Aug. 1935.

*702. _____ Employment provided by cutting and processing forest products in the Lake States. Tech. Note No. 156, 1 p., mimeo. May 1940.

*703. _____ Forests give extensive employment. Tech. Note No. 157, 1 p., mimeo. May 1940.

*704. _____ Additional volume of spruce pulpwood gained by utilizing to a 1½-inch top. Tech. Note No. 220, 1 p., mimeo. April 1944.

*705. _____ Gasoline requirements of small sawmills. Tech. Note No. 223, 1 p., mimeo. April 1944.

*706. Mayne, Howard W. Landownership in sixteen northeastern Minnesota counties. Tech. Note No. 282, 2 pp., mimeo. Oct. 1947. Lake States Timber Digest 2(3): 5. Nov. 6, 1947.

707. Mitchell, J. A. The Lake States Forest Experiment Station and the mining industry. Proc. Lake Superior Mining Institute, Jan. 19, 1924.

708. _____ The hole in our forest pocketbook. St. Paul Dispatch. April 1924.

709. _____ Timber of upper peninsula is cash crop. Development Bureau News. May 1, 1924.

710. Moser, H. C. Progress in land use planning in the Lake States. The Annual Cruise (Ore. Forest School). 1933.

711. _____ The new public domain - what is it? Minn. Conservationist. June 1935.

712. _____ Idle lands - idle men. Minn. State Planning Board, 32 pp., illus. 1938.

*713. Neetzel, J. R. Minnesota woodlot yields valuable crop. Tech. Note No. 248, 1 p., mimeo. Jan. 1946.

**714. Roe, E. I. What is a pine plantation worth? Amer. Forests 53(1): 28-29, 44. Jan. 1947.

*715. Sands, Waldo M. Selective logging yields higher grade lumber. Tech. Note No. 230, 1 p., mimeo. Jan. 1945.

716. _____ Arch logging in the Lake States. Miss. Valley Lumber. 77(33): 9. Aug. 23, 1946.

717. Scholz, Harold F. Quality of side lumber from oak tie bolts in southern Wisconsin and Minnesota. Cross Tie Bull. 25(10): 8-10. Oct. 1944.

718. _____ Tie grades produced in southern Wisconsin. Cross Tie Bull. 25(12): 8, 10, 12. Dec. 1944.

719. _____ Cheese box manufacture in southwestern Wisconsin. Barrel & Box & Packages 51(5): 9-11. May 1946.

**720. Vogel, Frederick H. Use of native Michigan timber in the box and crate industry. Mich. State Coll. Spec. Bull. 323, 43 pp. April 1943.

721. Wackerman, A. E. Current stumpage prices in Minnesota. Jour. For. 24: 301-302. 1926.

722. Kaufman, Clemens, and White, Charles H. Better lumber through good piling. Minn. Agric. Ext. Folder 104, illus. March 1942.

723. White, Charles H. Home-grown timber for farm buildings. Minn. Agric. Ext. Bull. 238, 16 pp., illus. June 1942.

724. White, Henry G. An introduction to the study of timber quality in the Lake States hardwoods. Papers Mich. Acad. Sci., Arts, and Letters 23: 339-348. 1937. (Publ. 1938)

725. _____ Review of "A Survey of Research in Forest Land Ownership: Report of a Special Committee on Research in Forest Economics." Jour. Polit. Econ. 49: 295-296. April 1941.

726. _____ Public forest homesteads. Papers Mich. Acad. Sci., Arts & Letters 27: 169-180. 1941.

*727. Zasada, Zigmond A. Jack pine pole supply in Minnesota. Tech. Note No. 260, 1 p., mimeo. July 1946.

728. _____ and Kluender, W. A. The future of aspen in the Lake States. Economic Note No. 21, 11 pp., mimeo. May 1946. Miss. Valley Lumber. 77(30): 8-9; 77(31): 16-17. July 26 and Aug. 2, 1946. Chemurgic Digest 5(11): 193, 195-199. June 15, 1946.

729. _____ Minnesota's jack pine could produce 100,000 poles annually. Miss. Valley Lumber. 77(31): 17. Aug. 2, 1946.

730. _____ and Kluender, W. A. Aspen has promise for a new commercial future. Wood, pp. 22-24. Oct. 1946.

*731. _____ Aspen properties and uses. Lake States Aspen Report No. 1, 9 pp., mult. May 1947. Cosgrove's Mag. 19(8): 32, 34, 36; 19(9): 34, 37. Sept. & Oct. 1947.

732. Lawson, E.L., and Zasada, Z. A. Closer utilization of black spruce - an essential to better forest management in Minnesota. Proc. S.A.F. meeting, Dec. 17-20, 1947. pp. 119-127.

*733. Zasada, Zigmond A. Time required to cut black spruce trees. Tech. Note No. 291, 2 pp., mimeo. April 1948.

*734. _____ Aspen lumber grades and characteristics. Lake States Aspen Report No. 6, 9 pp., mult. Sept. 1948. Lake States Timber Digest 3(2): 3; 3(3): 5-6. Nov. 4 and 18, 1948.

*735. _____ and Zehngraff, Paul J. Logging costs of aspen. Tech. Note No. 304, 1 p., mimeo. Oct. 1948. Lake States Timber Digest 3(4): 4. Dec. 2, 1948.

736. _____ and Frederickson, F. T. Limits of closer utilization of black spruce pulpwood. Pulp & Paper Mag. of Canada 49(11): 128, 130, 132, 134. Oct. 1948.

737. Zehngraff, Paul J., and Zasada, Zigmond A. Fence post production has possibilities: a promising market for inferior products. Blackduck American. April 11, 1946.

*738. Zillgitt, Walter M. Part-time woods work of northern farmers helpful in war production. Tech. Note No. 235, 1 p., mimeo. April 1945.

*739. _____ and Salminen, W. A. Valuable products can be recovered from No. 2 and poorer logs. Tech. Note No. 262, 1 p., mimeo. Oct. 1946.

*740. _____ Second growth woodland on farms can return an annual income. Tech. Note No. 270, 1 p., mimeo. Jan. 1947.

*741. _____ Log grade following selection cutting in northern hardwoods. Tech. Note No. 285, 1 p., mimeo. Oct. 1947.

*742. _____ Optimum economic stocking for northern hardwoods. Sta. Paper No. 10, 14 pp., mult. March 1948.

743. Zon, Raphael. The world shortage of coniferous timber and Russia's part in supplying it. World Agr. 2(3): 153-154, illus. 1922.

744. Greeley, W.B., Clapp, E.H., Smith, H.A., Zon, R., Sparhawk, W.N., Shepard W., and Kittredge, J., Jr. Timber: mine or crop? USDA Yearbook 1922: 83-180, illus. 1923.

745. Zon, Raphael. Lake States' opportunity for timber production. Amer. Lumber. 2490: 77. Feb. 3, 1923.

746. _____ Forestry as a part of land utilization. Tri-State Devlpmt. Cong. Minutes & Papers 4: 19-28. 1924.

747. _____ The woodlot in rural organization. Gopher Countryman 1(1): 8-9, illus. 1924.

748. _____ Forestry and land development in the Lake States. Jour. Land & Publ. Util. Econ. 1(1): 36-43. 1925.

749. _____ Forestry and the mining industry in the Lake Superior region. Lake Superior Mining Inst. Proc. 24: 271-279. 1925.

750. _____ The problem of pulpwood supply in the Lake States. Paper Trade Jour. 84(8): 280-285, illus. 1927.

751. _____ and Garver, R. D. Selective logging in the northern hardwoods of the Lake States, with special reference to the costs of handling small and large trees. (Advance Report.) No. Hemlock & Hdwd. Manfrs. Assoc., 23 pp. 1927.

752. _____ and Sparhawk, W. N. America and the world's woodpile. USDA Circ. 21, 15 pp., illus. Jan. 1928.

753. _____ What is industrial forestry? Jour. For. 26(1): 1-4. Jan. 1928.

754. _____ Review of "The New Exploration - A Philosophy of Regional Planning," by Benton MacKaye. 235 pp., 1928. Jour. For. 26(8): 1029-1030. Dec. 1928.

755. _____ Forest conditions in Wisconsin. Wis. Com. Forestry Conf. Off. Report 1928: 31-37. 1928.

756. _____ Forestry and the agricultural crisis. Ann. Amer. Acad. Polit. & Social Sci. 142(231): 70-76. March 1929.

757. _____ and Garver, R. D. Selective logging in the northern hardwoods of the Lake States. USDA Tech. Bull. No. 164, 46 pp., illus. Jan. 1930.

758. _____ Forestry and the economic crisis. Amer. For. 37(2): 91-92. Feb. 1931.

759. _____ The new public domain. Amer. For. 37(5): 261-264, 280. May 1931.

760. _____ National economic and social objectives in forest policy. Proc. Land Util. Conf., Chicago. Nov. 1931.

761. _____, et al. Forest land use in Wisconsin. (Report of the Committee on Land Use and Forestry). 156 pp., illus. April 1932.

762. _____ The upper peninsula fifty years from now. Development Bureau News 12(9). Nov. 1932.

763. _____ and Sparhawk, W. N. Trends in world wood consumption. In "A National Program for American Forestry," U.S. Sen. Doc. No. 12, pp. 279-297. April 1933.

764. _____ Land use planning by the states. Jour. Farm Economics 15(2): 236-242. April 1933.

765. _____ Planned land use. Minn. Conservationist, p. 1. Sept. 1933.

766. _____ Forestry throws a life line to stranded communities. Minn. Conservationist 11: 2-3, 14-18, illus. April 1934.

767. _____ and Moser, H.C. Physical and climatic features affecting land use. Chap. 2, "Land Utilization in Minnesota," pp. 34-48. 1934.

768. _____ and _____ Land policies in Minnesota. Chap. 3, "Land Utilization in Minnesota," pp. 49-55. 1934.

769. Anderson, William, and Zon, Raphael. Social and economic effects of past land development. Chap. 4, "Land Utilization in Minnesota," pp. 56-73. 1934.

770. Zon, Raphael, Moser, H.C., and Cunningham, R. N. Forest lands: their present condition and future development. Chap. 7, "Land Utilization in Minnesota," pp. 112-135. 1934.

771. _____, Frank, Bernard, and Moser, H. C. The use of land for recreation. Chap. 8, "Land Utilization in Minnesota," pp. 136-148. 1934.

772. _____ and Cunningham, R. N. Future use of land in Minnesota. Chap. 13, "Land Utilization in Minnesota," pp. 223-239. 1934.

773. _____ and _____ The farm woodland - a neglected resource. Univ. of Wis., Ext. Serv., Stencil Circ. 186, 6 pp., illus. March 1937.

774. _____ and _____ The need for farm forestry. Minn. Agr. Ext. Div., Spec. Bull. 191, 15 pp., illus. Sept. 1937.

775. _____ The relation of land use planning to municipal government in northern Minnesota. Minn. Municipalities 23(9): 322-323. Sept. 1938.

776. _____ A scientific discussion of the cutover area of Wisconsin and the Lake States. Wis. Counties 2(2): 12-14. Aug. 1939.

777. _____ The human side of land use. Jour. For. 37(9): 735-737. Sept. 1939.

778. _____ The cut-over region - breeding place of migrant labor. Wis. Carpenter & Builder, pp. 29-39. Spring issue 1941.

779. _____ America's rural slums. U.S. Week 1(26): 14-15. Sept. 6, 1941. Labor Today 1(5): 20-22. Oct. 1941. (Condensed version.)

780. _____ Review of "Ill Fares the Land," by Carey McWilliams. Midland Cooperator 9(20): 2. May 27, 1942.

*781. _____ and Duerr, William A. Farm forestry in the Lake States: an economic problem. USDA Circ. No. 661, 34 pp., illus. Nov. 1942.

782. _____ Toward fuller use of all land. Land Policy Review 7(3): 17-21. Fall 1944.

7. FOREST INFLUENCES
(STREAMFLOW, EROSION CONTROL, CLIMATE, SHELTERBELTS)

783. Aikman, J. M. The shelterbelt project. Papers 3rd annual meeting Minn. Acad. Sci., pp. 18-24. April 13, 1935.

784. Averell, James L. Review of "Studier över Skogsproduktion å Några Avdikade Torvmarker Inon Västerbottenskustland" (A Study of Forest Production on some Drained Peat Soils in the Västerbotten Coastland), by Paul Borjeson. 1927. Jour. For. 26(7): 934-936. Nov. 1928.

**785. _____ and McGrew, Paul C. The reaction of swamp forests to drainage in northern Minnesota. Minn. Dept. of Drainage & Waters, 66 pp., illus. Feb. 1929.

786. Bates, C. G., and Zeasman, O. R. Soil erosion - a local and national problem. Wis. Agr. Exp. Sta. Res. Bull. 99, 100 pp., illus. Aug. 1930.

787. _____ Chaining the father of waters. Amer. For. 36(2): 67-70, 106, 127. Feb. 1931.

788. _____ Erosion gnaws at the world's bread basket. Commerce, pp. 75-76. Sept. 1931.

789. _____ Erosion and the Middle West's "bald farms." Commerce 28(3): 30-31, 56, 58, illus. Oct. 1931.

*790. _____ Forests and streamflow. (Discussion of paper by W. G. Hoyt and H. C. Troxell.) Proc. of Amer. Soc. Civil Engineers. July 1932.

791. _____ Farms, floods and river navigation in the Mississippi Valley. Commerce. Sept. & Oct. 1932.

792. _____ Soil erosion in the Mississippi Valley. Jour. For. 31(1): 88-96. Jan. 1933.

**793. _____ The plains shelterbelt project. Jour. For. 32(9): 978-991. Dec. 1934.

**794. _____ Climatic characteristics of the plains region. Section 11, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 83-110. 1935.

795. _____ With flood and dust - erosion's $100,000,000 penalty. Commerce 33(3): 13-14, 50-52. April 1936.

796. _____ The forest influence on streamflow under divergent conditions. Jour. For 34(11): 961-969. Nov. 1936.

797. _____ Controlling mad waters. Amer. For. 43(6): 278-281, 300, 321-322. June 1937.

798. _____ Review of "Headwaters Control and Use" (papers presented at the Upstream Engineering Conference, Washington, D. C., Sept. 22 and 23, 1936). Jour. For. 35(9): 879-881. Sept. 1937.

799. _____ Reforestation and flood control. Jour. For. 36(10): 1073-1079. Oct. 1938.

800. _____ Symposium on "Forest Influence" studies and methodology. Chron. Bot. (Plant Sci. Digest) 5(2/3): 184-188. Summer 1939.

801. _____ Review of "Soil Conservation," by Hugh Hammond Bennett. 993 pp. 1939. Jour. For. 38(7): 603-604. July 1940.

**802. _____ and Stoeckeler, J. H. Snowdrift control on highways by planting of trees and shrubs. 14 pp., 5 figs., mimeo. Dec. 1941.

803. _____ and _____ Planting to control drifts on highways. Eng. News-Record 129(23): 70-74, illus. July 16, 1942.

*804. _____ The windbreak as a farm asset. USDA Farmers Bull. 1405, 22 pp., illus. Rev. Sept. 1944.

*805. _____ Shelterbelt influences. I. General description of studies made. Jour. For. 43(2): 88-92. Feb. 1945.

*806. _____ Shelterbelt influences. II. The value of shelterbelts in house-heating. Jour. For. 43(3): 176-196. Mar. 1945.

*807. _____ Wind movement in the plains. Tech. Note No. 245, 1 p., mimeo. Oct. 1945.

*808. _____ Shelterbelts as "conservers" of moisture. Tech. Note No. 293, 2 pp., mimeo. April 1948.

809. _____ Farm crops benefit from field shelterbelts. Minn. Farm & Home. Sci. 5(3): 6-7. May 31, 1948.

*810. _____ How shelterbelts benefit crops. Tech. Note No. 299, 1 p., mimeo. July 1948. Jour. For. 46(10): 767-768. Oct. 1948.

811. Muckenhirn, R. J., Ahlgren, H. L., and Farrington, R. A. Grass, friend of the farmer and the soil. Wis. Cons. Bull. 6(11): 23-25, illus. Nov. 1941.

812. Gevorkiantz, S. R., and Scholz, H.F. Review of "How to Propagate Forests in our Steppes and How to Take Care of Them," by G. M. Vysotsky. 24 pp. 1930. Jour. For. 32(3): 358-362. March 1934.

813. Lake States Forest Experiment Station. The plains shelterbelt project. Minn. Conservationist. Nov. 1934.

**814. _____ A survey of past plantings. Sec. 7, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 39-47. 1935.

*815. _____ Interception of rainfall by the forest. Tech. Note No. 14, 1 p., mimeo. Aug. 1929.

*816. _____ The growth of a gully. Tech. Note No. 49, 1 p., mimeo. Dec. 1931.

*817. _____ Is prairie forest planting practical? Tech. Note No. 81, 1 p., mimeo. May 1934.

*818. _____ The protective influence of the forest. Tech. Note No. 102, 1 p., mimeo. Jan. 1936.

*819. _____ New device measures use of water by trees. Tech. Note No. 122, 1 p., mimeo. Feb. 1937.

*820. _____ Subsoiling greatly increases tree survival in plains region. Tech. Note No. 123, 1 p., mimeo. Feb. 1937.

*821. _____ Forest litter and gravelly soils - effective conservers of water. Tech. Note No. 124, 1 p., mimeo. Feb. 1937.

*822. _____ Forest cover keeps frost line at shallo depth. Tech. Note No. 130, 2 pp., mimeo., illus. Sept. 1937.

*823. _____ Control of snow drifting by design of windbreaks. Tech. Note No. 135, 1 p., mimeo. Feb. 1938.

*824. _____ The grazed wood lot - potential flood hazard and low-grade pasture. Tech. Note No. 142, 2 pp., mimeo., illus. Sept. 1938.

*825. _____ Blowouts in the sandhills reclaimed by trees. Tech. Note No. 174, 1 p., mimeo. Jan. 1941.

*826. _____ Saving soil moisture for the trees in the northern great plains. Tech. Note No. 175, 1 p., mimeo. Jan. 1941.

*827. _____ Save shelterbelts and you save fuel. Tech. Note No. 224, 1 p., mimeo. Aug. 1944.

**828. LeBarron, Russell K., and Neetzel, John R. Drainage of forested swamps. Ecology 23(4): 457-465. illus. Oct. 1942.

829. Mitchell, J. A. Forest and climate. South. Lumber Jour. 24:91. 1926.

830. Mitchell, J. A. Interception of rainfall by the forest. Jour. For. 28(1): 101-102. Jan. 1930.

**831. Rudolf, Paul O. and Gevorkiantz, S. R. Shelterbelt experience in other lands. Sec. 9, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 59-76. 1935.

*832. Scholz, Harold F. Causes of decadence in the old groves of North Dakota. USDA Circ. 344, 38 pp., illus. Mar. 1935.

833. _____ and Stoeckeler, J. H. A lysimeter installation for studying forest influence problems. Jour. For. 38(3): 256-260. March 1940.

**834. Olson, D. S., and Stoeckeler, J. H. The proposed tree plantations - their establishment and management. Sec. 4, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 15-27. 1935.

**835. Hayes, F. A., and Stoeckeler, J. H. Soil and forest relationships of the shelterbelt zone. Sec. 12, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 111-153. 1935.

836. Stoeckeler, J. H. Subsoiling increases survival and growth of tree planting in the great plains. 9 pp., mult. Jan. 1937.

837. _____ Shelterbelt planting reduces wind erosion damage in western Oklahoma. Jour. Am. Soc. Agron. 30(11): 923-931. Nov. 1938.

838. _____ and Bates, C. G. Shelterbelts: the advantages of porous soils for trees. Jour. For. 37(3): 205-221. March 1939.

839. _____ Alkali tolerance of shelterbelt species. Plains Forester 5: 5-6. Nov. 1940.

840. _____ and Dortignac, E. J. Snowdrifts as a factor in growth and longevity of shelterbelts in the great plains. Ecol. 22(2): 117-124, illus. April 1941.

841. _____ Narrow shelterbelts for the southern great plains. Soil Conservation 11(1): 16-20. July 1945.

842. Munns, E. N., and Stoeckeler, Joseph H. How are the great plains shelterbelts? Jour. For. 44(4): 237-257. April 1946.

843. Stoeckeler, J. H. The great plains shelterbelt. Amer. Nurseryman 84(5): 7-10. Sept. 1, 1946.

844. Wackerman, A. E., and Livingston, L. F. Swamp drainage for forestry. Agric. Engineering 8(4): 79-80. April 1927.

845. _____ The marginal ditch and swamp drainage for forestry. Jour. For. 25(7): 848-851. Nov. 1927.

**846. Ahlgren, H. L., Wall, M. L., Muckenhirn, R. J., and Sund, J. M. Yields of renovated and unimproved permanent pastures on sloping land in southern Wisconsin. Jour. Amer. Soc. Agron. 38(10): 914-922. Oct. 1946.

847. _____, _____, _____, and _____ Yields of forage from woodland pastures on sloping land in southern Wisconsin. Jour. For. 44 (10): 709-711. Oct. 1946.

848. Zon, Raphael. How forests feed the clouds. In Caldwell, O. W., and Slosson, E. E., "Science Remaking the World," pp. 202-222, illus. 1923.

849. _____ Effect of drainage of swamps upon forest growth. Reclam. & Farm Engin. 9(2): 33-37, 42, illus. 1926.

850 _____ Effect of drainage on forest lands. Gopher Countryman 3(6): 13-14. March 1926.

851. _____ Swamp drainage. Paper Trade Jour. Nov. 4, 1926.

852. _____ The role of forests in the circulation of water on the earth's surface. Internatl. Cong. Plant Sci. Proc. 1: 741-749. 1926.

853. _____ Taming the father of waters. Jour. For. 25(5): 507-509. May 1927.

854. _____ Do forests prevent floods? Amer. For. & Forest Life 33: 387-392, 432, illus. 1927.

855. _____ Reforestation - a practical method of flood control. Floods, Forests and the Future. Amer. Tree Assoc. Aug. 1927.

*856. _____ Forests and water in the light of scientific investigation. U.S. Nat'l. Waterways Comm. Final Rept., Appr. 5, pp. 205-302. 1912. (U.S. Cong. 62d. 2d sess., S. Doc. 469.) (Reprinted with revised bibliography, 1927)

857. _____ Improving timber growth in northern swamps. USDA, Forest Worker 4(1): 11. 1928.

858. _____ Statement of Dr. Raphael Zon, of St. Paul, Minn., Director of the Lake States Forest Experiment Station. In U.S. Cong. 70, 1st sess., House Com. on Flood Control, Flood Control Hearings, pt. 5, pp. 3190-3272, illus. 1928.

859. _____ Forestry versus climate. Jour. For. 26(5): 711-713. May 1928.

860. _____ and Averell, James L. The effect of drainage on forest growth. Agric. Engineering 9(6): 171-173. June 1928. Pulp & Paper Mag. of Canada 27(3): Jan. 17, 1929. (Woodland News Sec. 5(1): 102-105)

861. _____ Review of "Forests and Stream-Flow Experiment at Wagon Wheel Gap, Colorado," by C. G. Bates and A. J. Henry. pp. 79. 1928. Jour. For. 26(8): 1030-1034. Dec. 1928.

862. _____ and Averell, James L. Drainage of swamps and forest growth. Wis.Agric. Exp. Sta. Res. Bull. 89, 22 pp., illus. March 1929.

**863. _____ The role of forests in the circulation of water on the earth's surface. Proc. Internat'l. Cong. Plant Sciences 1: 741-749. 1929. (Revised)

864. _____ Forests as a factor in flood control within the Upper Mississippi river basin. U. S. Cong. 70, 2d sess., House Doc. 573, Relation of Forestry to the Control of Floods in the Mississippi Valley, pp. 85-113, illus. 1929.

865. _____ and Averell, J. L. Growth in swamps before and after drainage. Jour. For. 28(1): 100-101. Jan. 1930.

866. _____ Control of erosion by means of reforestation. Proc. Nat'l. Drainage, Conservation, and Flood Control Congress, Louisville, Ky., Feb. 1932.

867. _____ Shelterbelts - futile dream or workable plan. Science 81(2104): 391-394. April 26, 1935.

*868. _____ What the study discloses. Sec. 2, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 3-10. 1935.

*869. _____ Prospective effects of the tree-planting program. Sec. 6, "Possibilities of Shelterbelt Planting in the Plains Region," pp. 33-38. 1935.

870. _____ Can floods be controlled? St. Paul Pioneer Press. Mar. 29, 1936. Forestry News Digest. March 1937.

871. _____ Zon stresses value of trees. Evening Huronite (Huron, S.D.). Feb. 28, 1938.

*872. _____ Climate and the nation's forests. USDA Yearbook 1941: 477-498, illus.

873. Arbogast, Carl F., and Stoeckeler, J. H. Norwegian forester visits the United States. Jour. For. 45(2): 130-131. Feb. 1947.

874. Averell, James L. The society of Swedish foresters. Jour. For. 25(5): 577-579. May 1927.

875. _____ European study for foresters. Timberman 29(3): 178-186. 1928.

876. _____ A Swedish forest week. Timberman 29(5): 184. March 1928.

877. _____ Review of "Forestry in Sweden," by Emil Kekich, 1927. Jour. For. 26(3): 369. March 1928.

878. _____ Life membership in the Society of American Foresters. Jour. For. 26(3): 415-416. March 1928.

879. _____ Forestry week in Sweden. St. Paul Pioneer Press. April 22, 1928.

880. _____ and Huntting, Seldon T. Education beyond the four-year college course in forestry. Jour. For. 26 (8): 1051-1054. Dec. 1928.

881. Bates, C. G. The precise expression of "dryness." Science 69(1793): 497. May 10, 1929.

882. Chase, Clarence D. Southern Minnesota sub-section meets in farm woods. Jour. For. 45(8): 616-617. August 1947.

883. Creighton, J. W. Sawmill air dogs save time. Tech. Note No. 292, 1 p., mimeo. April 1948.

**884. _____ Time study of small sawmill air dogs. Mich. Agric. Exp. Sta. Quart. Bull. 31(1): 41-56. August 1948.

885. Cunningham, R. N. Dr. Raphael Zon to retire Sept. 1 after 43 years active work with United States Forest Service. Miss. Valley Lumber. 75(3): 11-12. Aug. 4, 1944.

**886. _____ Forest cooperatives in the United States. U.S. Forest Service, Reappraisal Report No. 6, 18 pp., mult. 1947.

887. Demmon, E. L. Research at the Lake States Forest Experiment Station. Mich. Forester 26 & 27(1945 & 1946): 18-20. illus.

888. _____ Lake States Forest Experiment Station warns of critical times. Miss. Valley Lumber. 77(16): 15. April 19, 1946.

889. _____ Use of seasoned wood advocated in building by forest experts. Miss. Valley Lumber. 77(18): 13. May 3, 1946.

*890. _____ How can research help the Michigan timber owner? Sta. Paper No. 9, 9 pp., mimeo. June 1947.

891. _____ Minnesota's forestry situation.
Miss. Valley Lumber. 79(32): 8-10, 30. Aug. 6, 1948.
Lake States Timber Digest 2(23): 3-4. Aug. 26, 1948.
" " " " 2(24): 4. Sept. 9, 1948.
Timber Prod. Assoc. (Duluth) Monthly Bull. 4(1): 8-9. Sept. 1948.

*892. _____ Forestry situation in the Lake States.
Sta. Paper No. 13, 6 pp., mimeo. Sept. 1948.
Marquette Mining Jour., Week-End Extra, Oct. 30, 1948. (unpaged)

*893. _____ Minnesota forestry needs.
Minn. Conserv. Volunteer 11(66): 29-32. Sept.-Oct. 1948.

894. Eyre, F. H. When a tornado strikes a forest.
Minn. Conservationist, pp. 4-5. July 1933.

895. Frank, Bernard. The part of forestry in the reclamation of Palestine. Forest Worker. May 1933.

896. Gevorkiantz, S. R. Review of "The Principal Biochemical Law," by Professor S. L. Ivanov. 1926. Jour. For. 26(8): 1037-1039. Dec. 1928.

897. _____ and Rudolf, Paul O. Translation of "Materialy po Raionirovaniiu Gvaiiuly v Azerbaidzhane - Iz Itogov Trekhletnei Raboty (Information on the Selection of Areas for the Propagation of Guayule in Azerbaidjan - Summary of Three Years' Work)," by V. I. Cherepanov. 1936. Wash., mimeo., 24 pp. Feb. 1943.

**898. Johnson, Richard C. The sawmill scale (index) board. Mich. Agric. Exp. Sta. Quart. Bull. 28(3): 181-188. illus. Feb. 1946.

*899. _____ A simple accurate scale board for small sawmills. Tech. Note No. 264, 2 pp., mimeo., illus. Oct. 1946.

*900. _____ Lead indicating device for circular sawmill headrigs. Tech. Note No. 267, 2 pp., mimeo., illus. Jan. 1947.

901. Kittredge, Joseph Jr. The objectives of the Lake States Forest Experiment Station. North Woods. Oct.-Nov. 1923.

902. _____ Review of "Tree Ancestors," by Edward Wilber Berry. 269 pp. 1923. Jour. For. 22(2): 210-213. Feb. 1924.

903. _____ Mutual interests of foresters and engineers.
Tech. Engin. News 5(1): 12-13, 28, 1924.

904. _____ The farmer and the forests.
Wisc. Farmer 55(8): 1, 12-13. Feb. 25, 1926.

905. _____ Eyes that see and ears that hear. Ames Forester 9:43-47. 1926. Rocky Mtn. Dist. Bull. Nov. 1926. Service Bull. Jan. 31, 1927.

906. _____ Why not adopt the metric system now? Monthly Report of Forest Experiment Stations. March 1928.

907. _____ Review of "Mitteilungen der Schweizerischen Centralanstalt für das Forstliche Versuchswesen (Communications of the Swiss Forest Experiment Station)." 1927. Jour. For. 26(3): 364-367. March 1928.

908. _____ Review of "A Guide to the Wild Flowers," by Norman Taylor. 1928. Jour. For. 26(5): 702-703. May 1928.

909. Lake States Forest Experiment Station. Forestry research program inaugurated. 45th Annual Report of Univ. of Wisc. Reprint from Bull. 405, "What's New in Farm Science." Feb. 1929.

*910. _____ What causes "Birds-eye" maple. Tech. Note No. 13, 1 p., mimeo. March 1929.

911. _____ The Upper Peninsula Forest Experiment Station: what it is and what it does. Unpaged, illus. n.d. (1930)

912. _____ (In cooperation with Committee on Forestry, National Research Council.) Forest research in the United States. 138 pp., mimeo. Nov. 1, 1938.

913. _____ Chippewa field station. 16 pp., mult. 1938.

*914. _____ When to pick pine cones. Tech. Note No. 170, 1 p., mimeo. Aug. 1940.

*915. _____ How to keep Christmas trees fresh. Tech. Note No. 171, 1 p., mimeo. Dec. 1940.

*916. _____ Harvesting maple syrup. Tech. Note No. 196, 1 p., mimeo. Feb. 1943.

*917. _____ How the forest experiment station helps in the war effort. Tech. Note No. 200, 1 p., mimeo. Aug. 1943.

918. LeBarron, R. K. Do we have too many eggs in one basket? Bimonthly Research Report. Feb. 1, 1939.

919. _____ The sportsman and the forest. M.A.C. Gopher: 12-13. Sept. 1939.

*920. _____ and Swayne, Allen P. Retarding needle fall on black spruce Christmas trees. Jour. For. 38(12): 941-943. Dec. 1940.

921. Neff, L. P. A forest research center for northern Minnesota. Minn. Conserv. Volunteer 10(56): 49-50. Jan.-Feb. 1947.

922. Stoeckeler, J. H. Some notes on forestry in Argentina. Jour. For. 43(10): 760-761. Oct. 1945.

923. _____ The epic of Minnesota's forests. Amer. Forests 52(2): 62-63. Feb. 1946.

924. _____ A Greek looks at U.S. forestry. Jour. For. 44(10): 762-763. Oct. 1946.

925. _____ Wisconsin's new forest research center gets under way: basic program outlined. Tree Tips, p. 1. Nov. 1946.

926. _____ Wisconsin gets research center. Miss. Valley Lumber, 77(48): 8-9. Nov. 29, 1946.

927. _____ The northern Wisconsin forest research center. Lake States Timber Digest 1(12): 5, 15. March 13, 1947.

928. _____ Federal experimental forest is established. Timber Prod. Bull. (Upper Mich. & No. Wis.) No. 51, p. 7. June 28, 1947.

929. Wackerman, A. E. Pioneering in U.S.D.A. 600. Development Bureau News. May 1, 1925.

930. _____ Forestry needs a building. Gopher Countryman. March 1927.

931. White, H. G. Home-grown foresters and the Minnesota lumber industry. Gopher Beavey 1941: 54-58.

932. Zon, Raphael. The next great step ahead in forestry. Lumber 69(922):48. 1922.

933. _____ Future romance in the use of wood. St. Paul Pioneer Press. Oct. 14, 1923.

934. _____ Lake States Forest Experiment Station and its field. Lumber World Rev. 49(9): 61-63. 1923.

935. _____ Research problems in forestry in lake region. Mich. Alumnus 30(29): 916-919. 1924.

936. _____ Experiment station work in Lake States. Lumber World Rev. 48(3): 26-27. 1925.

937. _____ The goal of research in forestry. Gopher Countryman 2(6): 14-16. 1925.

938. _____ The work of the Lake States Forest Experiment Station. Minn. Hort. 53(5): 137-139. 1925.

939. _____ Practical results from the forest experiment stations.
Natl. Lumber Manfrs. Assoc. Rept. 23: 6-7. 1925.

940. _____ Engineering aspects of forestry.
Jour. Agric. Eng. 1925. Idaho Forester 8: 5-7, 36-37. 1926.

941. _____ Need for research in forestry.
Timberman 27(3): 50-54. 1926.

942. _____ The Paul Bunyan of the future.
Gopher Countryman 3(6): 11-12. March 1926.

943. _____ Plans for upper peninsula branch field station.
Development Bureau News. April 1926.

944. _____ Our forest schools.
Jour. For. 25(3): 252-256. March 1927.

945. _____ The lumber industry takes the cure.
Jour. For. 25(7): 777-779. Nov. 1927.

946. _____ Quo Vadimus.
Jour. For. 25(8): 925-927. Dec. 1927.

947. _____ Are foresters biologists or economists?
Jour. For. 26(3): 281-282. March 1928.

948. _____ A new milestone in forest research.
Forestry News Digest. May 19, 1928.

949. _____ The passing of the old-time forester.
Jour. For. 26(5): 561-563. May 1928.

950. _____ Forest research bill passed.
Univ. of Wis., Among Ourselves. June 1928.

951. _____ Blazing new trails in forestry.
Duluth Herald. Mag. Sec., p. 7. June 12, 1928.

952. _____ Farm problems as seen by a national forester.
(Mich.) Devlpmt. Bur. News 7(8): 1, 23. 1928.

953. _____ Forests and forestry. Encyclopedia Brittanica,
Vol 9, pp. 497-507. 1929.

954. _____ Where white pine once was king.
Nature Mag. 15: 310-313, 341-342, illus. 1930.

955. _____ The search for forest facts.
Amer. Forests & Forest Life 36: 421-423, 482, illus. 1930.

956. Ahern, G. P.; Marshall, Robert; Munns, E. N.; Pinchot, Gifford;
Shepard, Ward; Sparhawk, W. N.; and Zon, Raphael.
A letter to foresters.
Jour. For. 28(4): 456-458. April 1930.

957. Zon, Raphael. The Society comes of age.
Jour. For. 24(3): 308-315. March 1931.
Congress. Record. Jan. 1931.

958. _____ Forests. Encyclopaedia of the Social Sciences, Vol. 6, pp. 382-387. Dec. 1931.

959. _____ Our thanksgiving.
Minn. Conservationist, p. 1, Nov. 1933.

960. _____ Our conservation presidents.
Minn. Conservationist, p. 1, Feb. 1934.

961. _____ Back of it all - forest research.
Forestry News Digest. June 1934.

962. _____ Conservation and the farmer.
Minn. Conservationist. July 1934.

963. _____ Forest Primeval. Review of "German Forestry," by Franz Heske. 342 pp., 1938. New Republic, pp. 55-56. Aug. 17, 1938.

964. _____ Significant conference.
Service Bull. 25(11): 1-2. May 26, 1941.

965. _____ Forest research points the way.
Minn. Conservation Volunteer 2(11): 10-13. Aug. 1941.

966. _____ The vast gulf between democracy and tyranny.
Land Policy Rev. 5(5): 3-6. May 1942.

967. _____ Legalizing destructive logging practices.
St. Paul Pioneer Press. June 13, 1943.

968. January 1935.
Research - basis of sound practice.
Policy for development of experimental forests and ranges.
Effect of raking litter.
Past history of shelterbelts.
Relationship between marsh water levels and lake levels.
Gifford Pinchot returns to Washington.
Simplified type scheme for forest surveys.
Land utilization in Minnesota - a state program for the cut-over lands.
The present set-up of experiment stations remains unchanged.
Morning versus evening deer counts.
A guide for determining the density of stocking in even-aged stands
Release of young Norway pine from aspen competition.
Branch stations of the Lake States Forest Experiment Station.

969. February 1935.
Size of stock in relation to animal injury.
How to reduce sprouting of undesirable species.
Fuel wood sales and immediate cash return from cultural work.
One reason for the sparsity of Norway pine reproduction.
Ducks and the drought.
Interception of rainfall by forest canopy.
A small forest nursery.
Indirect rabbit control.
How fast do furrows fill in?
Board foot content of lumber.
Furrowing and grading improve survival in planting.
Census of agriculture.

970. March 1935.
Annual investigative meeting.
Danger of Ips damage following cultural operation.
A new planting chance for white pine.
Thinning in aspen.
Girdling reduces cost of cultural work in second-growth northern hardwood stands.
Border cuttings as an aid to regeneration.
Investigation of rodent damage.
Agreement between Forest Service and Biological Survey.

971. April 1935.
Seed germination technique.
Forests and circulation of water.
Soil temperature affects germination and development of white pine seedlings.
Girdling of northern hardwoods.
The growth rate of natural stands.
Cultivation of plantations.
Bark beetles and blue stain.
Research and Acquisition.
The soil as a guide to stand treatment.

972. May 1935.
Seventeenth century Italians understood forest-streamflow relationships.
Recent results from seed dormancy tests.
Girdling and poisoning.
Effect of soil temperature on growth of thinned stands.
Toward better survival.
A comparison of seedling and transplant stock.
How much wood in a cord?
Selective logging by lumber companies.
The seasonal food habits of the snowshoe hare.

973. June 1935.
Temperatures in planting furrows.
Power saw pruning.
New law in Wisconsin.
A method of estimating a deficiency of available phosphorus.
A new disease of Norway pine.
Information on a common rot.
Effects of burning and pasturing on the water absorption of forest soils.
Governor's conservation conference.
Natural vegetation map of the Lake States.

974. July 1935
Social responsibilities of scientists.
Large scale converting factors.
Vegetative reproduction of pin cherry.
Shelterbelt report.
What factors reduce plantation survival?
Effect of cold storage on germination.
Winter habits of deer.
Effects of forest on nitrification of the soil.
Science meeting.
Pre-germination treatments for Lake States trees.
Dye test for germination.
Silvicultural effects of release cuttings in plantations of white and Norway pine.

975. August 1935.
The shelterbelt project.
Condition of Minnesota forests.
Injury to planting stock from exposure.
Wind damage on the Superior.
Reforestation by airplane.
Seed treatments for shelterbelt species.
Tent caterpillar infestations.
Effect of pruning on height growth.

976. September 1935.
The Chippewa branch.
New forest experiment station.
Girdling fire cherry.
New hardwood nursery.
Seedling exposure.
Chief forester visits Region Nine.
Spruce seeding methods.
Sample plot technique.
Effect of cover on run-off.
Game food planting.
Forest taxation.
Forest fire hazard.
Forest survey report.
Volume of tops and limbs.
Water relation of plants in semi-arid soils.

977. October 1935.
How many ducks?
Soil erosion station.
Fall vs. spring planting on Superior forest.
Administrative jack pine study.
Creeping jenny a menace to seedlings.
How much jack pine seed on an acre?
Artificial pruning.
Stumpage prices in northern Minnesota.
Shelterbelt investigative meeting.
Relative merits of strips and plots in cruising.
The financial practicability of sustained yields in the northern hemlock-hardwood forest.
Conversion tables and charts.
Soil preparation aids establishment of seedlings.
Cash value of shelterbelts in Canada.

978. November 1935.
Brush fences facilitate rabbit snaring.
Wood handbook.
The Superior branch station.
Canadian planting observations.
The westernmost outpost of hemlock in Minnesota.
The wedge system of planting.
Landscaping and recreation.
Applied silviculture.
Cull factors for Michigan.
Shelterbelt planting.
Spruce budworm on jack pine.
Survey shows increased cut of firewood on Minnesota farms.
Iowa's conservation plan.

979. December 1935.
The Upper Peninsula branch station.
Compression wood in black spruce.
Extent of shelterbelt protection.
The Denbigh seed scarifier.
Natural reproduction in the Birch Lake plantation.
What is the significance of class of stock?
There's profit in aspen.
Rabbit or deer damage?
Second survey report completed.
Uses of the Abney level.

980. January-February 1936.
The Huron branch station.
Diesel oil eliminates sprouts.
Group selection versus single-tree selection.
White spruce never abundant in Minnesota forests.
Arsenical toxicity of nursery soils.
Aerial photography in forestry.
Actual and "normal" growth.
Bark injury by feeding rodents.
Shelterbelt report out.
Generalized soil maps of the entire United States.
Storage of seed after acid treatments.
The small forest nursery in Europe.
Tree seed manual in preparation.

981. March-April 1936.
The Michigan forest fire experiment station.
Oregon acts to protect restocking burn.
Large forest nurseries in Europe.
Annual research conference.
Effect of spacing on plantation growth.
Heart rot of balsam fir.
New record for fire protection in the Lake States.
Some important trends in European silviculture.
Propagation of mountain ash.
The influence of thinning on crown formation in spruce.
Temperance Valley conversion experiment.

982. May-June 1936.
The North Dakota branch station.
Eastern floods damage trees.
Yields of aspen in the Lake States.
Huron staff visits branch station.
The production of certified nursery stock.
Forests and tuberculosis in the Tennessee Valley.
Influence of storage conditions on white pine seed.
Soil erosion research conference.
Determination of cubic volume in the field.
The Station's library.
Administrative research on the Manistee.
Thirty years of thinning white pine.

983. July-August 1936.
Effect of density of sowing upon winter hardiness of jack pine.
An unusual pruning method.
Shelterbelt effectiveness.
The director to visit Europe.
Management for maximum volume or highest quality in Denmark.
Dry seeds can stand higher temperatures.
The importance of small streams.
The shingle industry of the Upper Peninsula.
Grass sown in bags checks gully erosion.
Yeast from waste pulp liquor.
Conservation education in Minnesota.
Distribution of rainfall during the fire season.

984. September-October 1936.
Land use conference.
The hardships of a seedling's first year.
Squirrels versus jack pine.
Succession demonstrated.
Minnesota forests show increased growth.
Early root development of cottonwood.
More about jack pine seeds.
South Dakota forestry report released.
Does protective coloration extend to tree seed?
European planting practices.
Seed source influences drought resistance of green ash.
Fire danger stations installed.

985. Spring 1937
Notes on European forestry.
Forest inventory completed.
New disease of Norway pine.
Heat, drought or both?
Jack pine seed supply.
Forest survey shows larger timber volume in two states.
Bigger stock - better survival.
Less watering - greater drought resistance.
What are forests worth for flood control?

986. Summer 1937.
Spring or fall for planting?
Girdling pays dividends.
Trees bring benefits to the Danish heath lands.
A new fire danger meter for the Lake States.
Three profits from improvement cuttings.
Shelterbelt experiences in Canada.
The effect of freezing temperature on planting stock.
"Save the pieces."
The effect of weeding on early growth of jack pine.
Rodents and direct seeding.
Planting in the Danish heath.

987. Spring 1938

Progress in fire protection in Michigan.
A quick, accurate method for determining the average size of planting stock.
Deer damage to jack pine plantation in Minnesota.
Chestnut in Upper Michigan.
Girdled aspen good for fuelwood.
Interception of rainfall by herbaceous vegetation.
Percentage of cull for some hardwood-hemlock stands on the Nicolet and Chequamegon National Forests, Wisconsin.
Beaver feeding experiment, Minnesota.
Commercial thinning in dense jack pine is successful.
"It's an ill wind---."
Tip moth attacks.

988. Winter 1939.

Forest survey paints an encouraging picture.
Wisconsin's farm consumption of fence posts largest in Lake States.
A commercial selective cutting in hemlock-hardwoods.
Minnesota paper company tries selective logging.
Forest operations of a Wisconsin lumber company.
Forest industries of Marathon County, Wisconsin.
Opening of jack pine cones at different heights above ground.
When a farmer cuts his own timber. . . .
Squirrels vs. black spruce.

INDEX

1/ Dates in parentheses indicate period of employment at the Lake States Forest Experiment Station.

Lake States Forest Experiment Station #40-94, 230-283, 427-472, 483-499, 564-571, 613-646, 696-705, 813-827, 909-917, 968-988.
LeBarron, R. K. (1932-1945) #20, 95-108, 284-285, 500, 572, 671, 828, 918-920.
Limstrom, G. A. (1937-1938) #360-361.

Macon, J. W. (1935-1942) #473, 647-650.
Mayne, H. W. (1946-) #706.
Meuli, L. J. (1934-1938) #286-287, 344, 346-347.
Mitchell, J. A. (1923-) #110-111, 288-289, 501-521, 707-709, 829-830.
Moore, F. I. (1942-1943) #651.
Moser, H. C. (1929-1942) #579, 581-582, 584, 647, 710-712, 767-768, 770-771.
Mowat, E. L. (1927-1933) #112-115, 202.

Neetzel, J. R. (1930-) #16, 19, 652-655, 713, 828.
Neff, L. P. (1946-) #116, 921.

Olsen, L. P. (1946-) #420, 656-658.
Olson, G. T. (1934) #37.

Richman, H. W. (1935-1938) #511.
Roe, E. I. (1929-) #27, 117-129, 222, 285, 290-296, 714.
Rudolf, P. O. (1930-) #28, 120, 130-133, 221, 225-226, 297-333, 532-533, 831, 897.

Salminen, W. A. (1928-) #134, 739.
Sands, W. M. (1942-1947) #659-663, 715-716.
Sauer, K. W. (1935-1937) #135.
Scholz, H. F. (1928-) #136-142, 408, 419, 474, 481, 522, 534, 664-665, 693, 717-719, 812, 832-833.
Shirley, H. L. (1929-1938) #143-158, 223, 287, 334-348.
Stoddard, C.H., Jr. (1934, 1937) #682.
Stoeckeler, J. H. (1931-) #159-171, 349-368, 475, 802-803, 833-843, 873, 922-928.

Vogel, F. H. (1941-1943) #720.

Wackerman, A. E. (1924-1927) #172-180, 369, 476-478, 721, 844-845, 929-930.
Wall, M. L. (1940-1945) #846-847.
Ware, E. R. (1935-1936) #370, 666-667.
White, C. H. (1940-1942) #722-723.
White, H. G. (1934-1948) #584, 586, 724-726, 931.
Wijkstrom, S. (1929) #668.

Zasada, Z. A. (1945-) #727-737.
Zehngraff, P. J. (1930-) #21-24, 28, 158, 181-190, 371-372, 406, 479-480, 535, 688, 735, 737.
Zillgitt, W. M. (1942-) #191-196, 536-538, 738-742.
Zon, R. (1923-1944) #197-208, 373, 389, 478, 481, 523, 669-670, 743-782, 848-872, 932-967.